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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2017

Or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission file number 001-35817

CANCER GENETICS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**04-3462475**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

201 Route 17 North 2nd Floor
Rutherford, NJ 07070
(201) 528-9200
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☒
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

As of November 6, 2017, there were 24,253,831 shares of common stock, par value $0.0001 of Cancer Genetics, Inc. outstanding.

CANCER GENETICS, INC. AND SUBSIDIARIES
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PART I — FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

Cancer Genetics, Inc. and Subsidiaries
Consolidated Balance Sheets (Unaudited)
(in thousands, except par value)

	September 30, 2017	December 31, 2016
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	**$ 4,807**	$ 9,502
Accounts receivable, net of allowance for doubtful accounts of 2017 $2,277; 2016 $1,387	**15,797**	11,748
Other current assets	**2,881**	2,174
Total current assets	**23,485**	23,424
FIXED ASSETS, net of accumulated depreciation	**6,009**	4,738
OTHER ASSETS		
Restricted cash	**300**	300
Patents and other intangible assets, net of accumulated amortization	**8,356**	1,503
Investment in joint venture	**247**	268
Goodwill	**14,158**	12,029
Other	**1,415**	172
Total other assets	**24,476**	14,272
Total Assets	**$ 53,970**	$ 42,434
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable and accrued expenses	**$ 9,314**	$ 8,148
Obligations under capital leases, current portion	**271**	109
Deferred revenue	**109**	789
Line of credit	**2,000**	—
Term note, current portion	**—**	2,000
Total current liabilities	**11,694**	11,046
Term note	**4,936**	2,654
Obligations under capital leases	**726**	374
Deferred rent payable and other	**181**	290
Warrant liability	**4,167**	2,018
Deferred revenue, long-term	**1,130**	428
Total Liabilities	**22,834**	16,810
STOCKHOLDERS' EQUITY		
Preferred stock, authorized 9,764 shares, $0.0001 par value, none issued	**—**	—
Common stock, authorized 100,000 shares, $0.0001 par value, 24,252 and 18,936 shares issued and outstanding at September 30, 2017 and December 31, 2016, respectively	**2**	2
Additional paid-in capital	**158,068**	139,576
Accumulated other comprehensive (loss)	**(1)**	—
Accumulated (deficit)	**(126,933)**	(113,954)
Total Stockholders' Equity	**31,136**	25,624
Total Liabilities and Stockholders' Equity	**$ 53,970**	$ 42,434

See Notes to Unaudited Consolidated Financial Statements.

Cancer Genetics, Inc. and Subsidiaries
Consolidated Statements of Operations and Other Comprehensive Loss (Unaudited)
(in thousands, except per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	**2017**	2016
Revenue	**$ 8,028**	$ 6,750	**$ 21,598**	$ 19,819
Cost of revenues	**4,588**	4,444	**12,831**	12,832
Gross profit	**3,440**	2,306	**8,767**	6,987
Operating expenses:				
Research and development	**981**	1,594	**3,080**	4,806
General and administrative	**4,346**	3,701	**11,352**	11,677
Sales and marketing	**1,301**	1,054	**3,437**	3,731
Total operating expenses	**6,628**	6,349	**17,869**	20,214
Loss from operations	**(3,188)**	(4,043)	**(9,102)**	(13,227)
Other income (expense):				
Interest expense	**(350)**	(111)	**(797)**	(344)
Interest income	**10**	4	**37**	21
Change in fair value of acquisition note payable	**105**	18	**(114)**	119
Change in fair value of warrant liability	**2,790**	712	**(3,927)**	729
Other expense	**—**	(325)	**(46)**	(325)
Total other (expense)	**2,555**	298	**(4,847)**	200
Loss before income taxes	**(633)**	(3,745)	**(13,949)**	(13,027)
Income tax (benefit)	**—**	—	**(970)**	—
Net (loss)	**$ (633)**	$ (3,745)	**$ (12,979)**	$ (13,027)
Basic net (loss) per share	**$ (0.03)**	$ (0.23)	**$ (0.65)**	$ (0.88)
Diluted net (loss) per share	**$ (0.15)**	$ (0.23)	**$ (0.65)**	$ (0.88)
Basic weighted-average shares outstanding	**21,577**	16,519	**20,059**	14,868
Diluted weighted-average shares outstanding	**22,359**	16,519	**20,059**	14,868
Net (loss)	**(633)**	(3,745)	**(12,979)**	(13,027)
Foreign currency translation (loss)	**(1)**	—	**(1)**	—
Comprehensive (loss)	**(634)**	(3,745)	**(12,980)**	(13,027)

See Notes to Unaudited Consolidated Financial Statements.

Cancer Genetics, Inc. and Subsidiaries
Consolidated Statements of Cash Flows (Unaudited)
(in thousands)

	Nine Months Ended September 30, 2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES		
Net (loss)	**$ (12,979)**	$ (13,027)
Adjustments to reconcile net (loss) to net cash (used in) operating activities:		
Depreciation	**1,436**	1,502
Amortization	**234**	260
Provision for bad debts	**890**	8
Stock-based compensation	**1,395**	1,538
Change in fair value of acquisition note payable	**114**	(119)
Change in fair value of warrant liability	**3,927**	(729)
Amortization of debt issuance costs	**51**	9
Amortization of discount on debt	**134**	—
Loss in equity method investment	**21**	45
Loss on extinguishment of debt	**78**	—
Changes in:		
Accounts receivable	**(4,029)**	(7,066)
Other current assets	**(606)**	(67)
Other non-current assets	**251**	(9)
Accounts payable, accrued expenses and deferred revenue	**(1,057)**	372
Deferred rent payable and other	**(109)**	(16)
Net cash (used in) operating activities	**(10,249)**	(17,299)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of fixed assets	**(1,192)**	(345)
Patent costs	**(73)**	(127)
Purchase of cost method investment	**(200)**	—
Acquisition of vivoPharm, Pty Ltd., net of cash acquired	**(656)**	—
Net cash (used in) investing activities	**(2,121)**	(472)
CASH FLOWS FROM FINANCING ACTIVITIES		
Principal payments on capital lease obligations	**(170)**	(101)
Proceeds from warrant exercises	**1,827**	—
Proceeds from option exercises	**7**	—
Proceeds from offerings of common stock with derivative warrants, net of certain offering costs	**—**	9,962
Proceeds from borrowings on Silicon Valley Bank line of credit	**2,000**	—
Proceeds from Partners for Growth IV, L.P. term note	**6,000**	—
Proceeds from Aspire Capital common stock purchases, net of certain offering costs	**2,965**	—
Principal payments on Silicon Valley Bank term note	**(4,667)**	(833)
Payment of debt issuance costs and loan fees	**(287)**	—
Net cash provided by financing activities	**7,675**	9,028
Net (decrease) in cash and cash equivalents	**(4,695)**	(8,743)
CASH AND CASH EQUIVALENTS		
Beginning	**9,502**	19,459
Ending	**$ 4,807**	$ 10,716
SUPPLEMENTAL CASH FLOW DISCLOSURE		
Cash paid for interest	**$ 633**	$ 250
SUPPLEMENTAL DISCLOSURE OF NONCASH INVESTING AND FINANCING ACTIVITIES		
Fixed assets acquired through capital lease arrangements	**$ 567**	$ —
Derivative warrants issued with debt	**1,004**	—
Acquisition of vivoPharm business	**9,856**	—

See Notes to Unaudited Consolidated Financial Statements.

Notes to Unaudited Consolidated Financial Statements

Note 1. Organization, Description of Business, Basis of Presentation, Acquisition and Recent Accounting Pronouncements

We are an emerging leader in the field of precision medicine, enabling individualized therapies in the field of oncology through our diagnostic products and services and molecular markers. We develop, commercialize and provide molecular- and biomarker-based tests and services that enable physicians to personalize the clinical management of each individual patient by providing genomic information to better diagnose, monitor and inform cancer treatment and that enable biotech and pharmaceutical companies engaged in oncology trials to better select candidate populations and reduce adverse drug reactions by providing information regarding genomic factors influencing subject responses to therapeutics. We have a comprehensive, disease-focused oncology testing portfolio. Our tests and techniques target a wide range of cancers, covering nine of the top ten cancers in prevalence in the United States, with additional unique capabilities offered by our FDA-cleared Tissue of Origin® test for identifying difficult to diagnose tumor types or poorly differentiated metastatic disease. Following the acquisition of vivoPharm, Pty Ltd. ("vivoPharm"), as discussed in more detail below, we provide contract research services, focused primarily on unique specialized studies to guide drug discovery and development programs in the oncology and immune-oncology fields.

We were incorporated in the State of Delaware on April 8, 1999 and have offices and state-of-the-art laboratories located in California, New Jersey, North Carolina, Pennsylvania, Shanghai (China), Victoria (Australia) and Hyderabad (India). Our laboratories comply with the highest regulatory standards as appropriate for the services they deliver including CLIA, CAP, NY State, California State and NABL (India). Our services are built on a foundation of world-class scientific knowledge and intellectual property in solid and blood-borne cancers, as well as strong academic relationships with major cancer centers such as Memorial Sloan-Kettering, Mayo Clinic, and the National Cancer Institute.

Basis of Presentation

The accompanying unaudited condensed financial statements of the Company have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") for interim financial information and with the instructions for interim reporting as prescribed by the Securities and Exchange Commission. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary to make the financial statements not misleading have been included. As such, the information included in this quarterly report on Form 10-Q should be read in conjunction with the audited consolidated financial statements as of and for the year ended December 31, 2016, filed with the Securities and Exchange Commission on March 23, 2017. The consolidated balance sheet as of December 31, 2016, included herein was derived from the audited financial statements as of that date, but does not include all disclosures including notes required by GAAP. Interim financial results are not necessarily indicative of the results that may be expected for any future interim period or for the year ending December 31, 2017.

Foreign Currency Translation

During the three months ended September 30, 2017, we started accounting for our foreign currency translation in other comprehensive income (loss). Assets and liabilities recorded in foreign currencies are translated at the exchange rate on the balance sheet date. Revenue and expenses are translated at average rates of exchange prevailing during the year. Translation adjustments for prior periods have not been presented, as they are not material.

Liquidity and Going Concern

At September 30, 2017, our cash position and history of losses required management to asses our ability to continue operating as a going concern, according to FASB Accounting Standards Update No. 2014-15, Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern ("ASU 2014-15"). Management evaluated the history and operational losses to have a material effect on our ability to continue as a going concern, unless we take actions to alleviate those conditions. Our primary sources of liquidity have been funds generated from our debt financings and equity financings. We have reduced, and plan to continue reducing, our operating expenses, and expect to grow our revenue in 2017 and beyond, and have also increased our cash collections from our customers and third-party payors and plan to continue to improve our cash collection results.

Management believes that its existing cash and cash equivalents, taken together with the borrowings available from the Silicon Valley Bank line of credit and the common stock purchase agreement with Aspire Capital Fund, LLC (described in Note 3), will be sufficient to fund the Company's operations for at least the next twelve months after filing this quarterly report on Form 10-Q.

Acquisition of vivoPharm

On August 15, 2017, we purchased all of the outstanding stock of vivoPharm, with its principal place of business in Victoria, Australia, in a transaction valued at approximately $1.2 million in cash, $9.5 million in the Company's common stock based on the closing price of the stock on August 15, 2017, plus an estimated settlement of $345,000 for excess working capital in accounts payable and accrued expenses in the accompanying balance sheet. The Company has deposited in escrow 20% of the stock consideration until the expiration of twelve months from the closing date to serve as the initial source for any indemnification claims and adjustments. The Company had an estimated $150,000 in transaction costs associated with the purchase of vivoPharm, which were expensed during the three and nine months ended September 30, 2017.

Prior to the acquisition, vivoPharm was a contract research organization ("CRO") that specialized in planning and conducting unique, specialized studies to guide drug discovery and development programs with a concentration in oncology and immuno-oncology. The transaction is being accounted for using the acquisition method of accounting for business combinations in accordance with GAAP. Under this method, the total consideration transferred to consummate the acquisition is being allocated to the identifiable tangible and intangible assets acquired and liabilities assumed based on their respective fair values as of the closing date of the acquisition. The acquisition method of accounting requires extensive use of estimates and judgments to allocate the consideration transferred to the identifiable tangible and intangible assets acquired and liabilities assumed. Accordingly, the allocation of the consideration transferred is preliminary and will be adjusted upon completion of the final valuation of the assets acquired and liabilities assumed. The final valuation is expected to be completed as soon as practicable but no later than twelve months after the closing date of the acquisition.

The estimated allocation of the purchase price as of August 15, 2017 consists of the following (in thousands):

Cash	$	544
Accounts receivable		905
Lab supplies		1,258
Prepaid expenses and other current assets		101
Fixed assets		949
Intangible assets		7,014
Goodwill		2,129
Accounts payable and accrued expenses		(913)
Deferred revenue		(814)
Obligations under capital leases		(117)
Total purchase price	$	11,056

The following table provides certain pro forma financial information for the Company as if the acquisition of vivoPharm discussed above occurred on January 1, 2016 (in thousands except per share amounts):

	Three Months Ended September 30		**Nine Months Ended September 30,**	
	2017	2016	**2017**	2016
Revenue	**$ 9,069**	$ 7,958	**$ 25,335**	$ 23,595
Net loss	**(976)**	(3,919)	**(13,788)**	(13,596)
Basic net loss per share	**$ (0.04)**	$ (0.20)	**$ (0.61)**	$ (0.76)
Diluted net loss per share	**(0.16)**	(0.20)	**(0.61)**	(0.76)

The pro forma numbers above are derived from historical numbers of the Company and vivoPharm. Over time the operations of vivoPharm will be integrated into the operations of the Company. At the current time, we do not have enough information to prepare a reliable estimate of any possible changes.

The results of operations for the three and nine months ended September 30, 2017 include the operations of vivoPharm from August 15, 2017, which accounted for approximately $794,000 of the Company's consolidated Discovery Services revenue.

The net income of vivoPharm that is included in the Company's results of operations for the three and nine months ended September 30, 2017 was approximately $380,000.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update 2014-09, Revenue from Contracts with Customers (Topic 606) ("ASU 2014-09"), requiring an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. As issued and amended, ASU 2014-09 will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective and permits the use of either a full retrospective or retrospective with cumulative effect transition method. The updated standard becomes effective for the Company in the first quarter of fiscal year 2018. Early adoption is permitted in the first quarter of fiscal year 2017. The Company believes its Biopharma Service and Discovery Service revenues will be affected by the new standard. The Company is presently evaluating all of its contracts for performance obligations and variable consideration provisions that may affect the timing of revenue recognition subsequent to ASU 2014-09's adoption. The Company expects to adopt the new standard on January 1, 2018, using the modified retrospective approach, which involves applying the new standard to all contracts initiated on or after the effective date and recording an adjustment to opening equity for pre-existing contracts that have remaining obligations as of the effective date.

Note 2. Revenue and Accounts Receivable

Revenue by service type for the three and nine months ended September 30, 2017 and 2016 is comprised of the following (in thousands):

	Three Months Ended September 30,		**Nine Months Ended September 30,**	
	2017	2016	**2017**	2016
Biopharma Services	**$ 4,168**	$ 3,805	**11,175**	$ 11,374
Clinical Services	**2,880**	2,687	**8,887**	7,685
Discovery Services	**980**	258	**1,536**	760
	$ 8,028	$ 6,750	**$ 21,598**	$ 19,819

Accounts receivable by service type at September 30, 2017 and December 31, 2016 consists of the following (in thousands):

	September 30, 2017	December 31, 2016
Biopharma Services	**$ 3,702**	$ 3,683
Clinical Services	**13,072**	8,972
Discovery Services	**1,300**	480
Allowance for doubtful accounts	**(2,277)**	(1,387)
	$ 15,797	$ 11,748

Allowance for Doubtful Accounts (in thousands)	
Balance, December 31, 2016	$ 1,387
Bad debt expense	890
Balance, September 30, 2017	$ 2,277

Revenue for Biopharma Services are customized solutions for patient stratification and treatment selection through an extensive suite of DNA-based testing services. Clinical Services are tests performed to provide information on diagnosis, prognosis and theranosis of cancers to guide patient management. These tests can be billed to Medicare, another third party insurer or the referring community hospital or other healthcare facility. Discovery Services are services that provide the tools and testing methods for companies and researchers seeking to identify new DNA-based biomarkers for disease. The breakdown of our Clinical Services revenue (as a percent of total revenue) is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	**2017**	2016
Medicare	**11%**	14%	**14%**	13%
Other insurers	**19%**	21%	**22%**	20%
Other healthcare facilities	**6%**	5%	**5%**	6%
	36%	40%	**41%**	39%

We have historically derived a significant portion of our revenue from a limited number of test ordering sites, although the test ordering sites that generate a significant portion of our revenue have changed from period to period. Test ordering sites account for all of our Clinical Services along with a portion of the Biopharma Services revenue. Our test ordering sites are largely hospitals, cancer centers, reference laboratories, physician offices and biopharmaceutical companies. Oncologists and pathologists at these sites order the tests on behalf of the needs of their oncology patients or as part of a clinical trial sponsored by a biopharmaceutical company in which the patient is being enrolled. We generally do not have formal, long-term written agreements with such test ordering sites, and, as a result, we may lose a significant test ordering site at any time.

The top five test ordering sites during the three months ended September 30, 2017 and 2016 accounted for approximately 45% and 39% of our testing volumes, respectively. During the three months ended September 30, 2017, there was one biopharmaceutical company which accounted for approximately 11% of our total revenue. During the three months ended September 30, 2016, there was one biopharmaceutical company which accounted for approximately 18% of our total revenue.

The top five test ordering sites during the nine months ended September 30, 2017 and 2016 accounted for approximately 40% and 31% of our testing volumes, respectively. During the nine months ended September 30, 2017, there was one biopharmaceutical company which accounted for approximately 11% of our total revenue. During the nine months ended September 30, 2016, there was one biopharmaceutical company which accounted for approximately 10% of our total revenue.

Note 3. Common Stock Purchase Agreement with Aspire Capital

On August 14, 2017, we entered into a Common Stock Purchase Agreement (the "Purchase Agreement") with Aspire Capital Fund, LLC, an Illinois limited liability company ("Aspire Capital"), which provides that Aspire Capital is committed to purchase up to an aggregate of $16.0 million of our common stock (the "Purchase Shares") from time to time over the term of the Purchase Agreement. Aspire Capital made an initial purchase of 1,000,000 Purchase Shares (the "Initial Purchase") at a purchase price of $3.00 per share on the commencement date of the agreement.

After the commencement date, on any business day over the 24-month term of the Purchase Agreement, we have the right, in our sole discretion, to present Aspire Capital with a purchase notice (each, a "Purchase Notice") directing Aspire Capital to purchase up to 33,333 Purchase Shares per business day, provided that Aspire Capital will not be required to buy Purchase Shares pursuant to a Purchase Notice that was received by Aspire Capital on any business day on which the last closing trade price of our common stock on the NASDAQ Capital Market is below $3.00. The Company and Aspire Capital also may mutually agree to increase the number of shares that may be sold to as much as an additional 2,000,000 Purchase Shares per business day. The purchase price per Purchase Share will be $3.00. As consideration for entering into the Purchase Agreement, we issued 320,000 shares of our common stock to Aspire Capital ("Commitment Shares").

The number of Purchase Shares covered by and timing of each Purchase Notice are determined by us, at our sole discretion. The aggregate number of shares that we can sell to Aspire Capital under the Purchase Agreement may in no case exceed 3,938,213 shares of our common stock (which is equal to approximately 19.9% of the common stock outstanding on the date of the Purchase Agreement), including the 320,000 Commitment Shares and the 1,000,000 Initial Purchase Shares, unless shareholder approval is obtained to issue additional shares.

Our net proceeds will depend on several factors, including the frequency of our sales of Purchase Shares to Aspire Capital and the frequency at which the last closing trade price of our common stock is below $3.00, subject to a maximum of $16.0 million in gross proceeds, including the Initial Purchase. Our delivery of Purchase Notices will be made subject to market conditions, in light of our capital needs from time to time and under the limitations contained in the Purchase Agreement. We currently intend to use the net proceeds from sales of Purchase Shares for general corporate purposes and working capital requirements.

As of September 30, 2017, the Company has sold 1,000,000 shares under this agreement at $3.00 per share, resulting in proceeds of approximately $2,965,000, net of offering costs of approximately $35,000. The Company has also issued 320,000 shares as consideration for entering into the Purchase Agreement. The Company has not deferred any offering costs associated with this

agreement.

Note 4. Earnings Per Share

For purposes of this calculation, stock warrants, outstanding stock options and unvested restricted shares are considered common stock equivalents using the treasury stock method, and are the only such equivalents outstanding.

Basic net loss and diluted net loss per share data were computed as follows (in thousands except per share data):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	**2017**	2016
Numerator:				
Net (loss) for basic earnings per share	**$ (633)**	$ (3,745)	**$ (12,979)**	$ (13,027)
Change in fair value of warrant liability	**2,790**	—	**—**	—
Net (loss) for diluted earnings per share	**$ (3,423)**	$ (3,745)	**$ (12,979)**	$ (13,027)
Denominator:				
Weighted-average basic common shares outstanding	**21,577**	16,519	**20,059**	14,868
Assumed conversion of dilutive securities:				
Common stock purchase warrants	**782**	—	**—**	—
Potentially dilutive common shares	**782**	—	**—**	—
Denominator for diluted earnings per share – adjusted weighted-average shares	**22,359**	16,519	**20,059**	14,868
Basic net (loss) per share	**$ (0.03)**	$ (0.23)	**$ (0.65)**	$ (0.88)
Diluted net (loss) per share	**$ (0.15)**	$ (0.23)	**$ (0.65)**	$ (0.88)

The above table includes adjustments to diluted earnings per share in accordance with FASB Accounting Standards Codification (“ASC”) 260. The adjustments were required for the three months ended September 30, 2017 as the derivative warrants were dilutive and the change in fair value of the derivative warrants was a gain.

The following table summarizes equivalent units outstanding that were excluded from the earnings per share calculation because their effects were anti-dilutive (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	**2017**	2016
Common stock purchase warrants	**4,163**	7,145	**6,574**	7,145
Stock options	**2,816**	2,128	**2,816**	2,128
Restricted shares of common stock	**115**	73	**115**	73
	7,094	9,346	**9,505**	9,346

Note 5. Sale of Net Operating Losses

On February 22, 2017, we sold $18,177,059 of gross State of New Jersey NOL’s relating to the 2014 and 2015 tax years for approximately $876,000 as well as $167,572 of state research and development tax credits. The sale resulted in the net receipt by the Company of approximately $970,000. This figure includes all costs and expenses associated with the sale of these state tax attributes as deducted from the gross sales price of $1,043,517.

Note 6. Term Notes and Line of Credit

On March 22, 2017, we refinanced our debt with Silicon Valley Bank (“SVB”), by repaying the outstanding term loan (“SVB Term Note”), which was scheduled to mature in April 2019, and entered into a new two year asset-based revolving line of

credit agreement. The new SVB credit facility provides for an asset-based line of credit ("ABL") for an amount not to exceed the lesser of (a) $6.0 million or (b) 80% of eligible accounts receivable plus the lesser of 50% of the net collectible value of third party accounts receivable or three (3) times the average monthly collection amount of third party accounts receivable over the previous quarter. The ABL requires monthly interest payments at the Wall Street Journal prime rate plus 1.50% (5.75% at September 30, 2017) and matures on March 22, 2019. We paid to SVB a $30,000 commitment fee at closing and will pay a fee of 0.25% per year on the average unused portion of the ABL. At September 30, 2017, we have borrowed $2.0 million on the ABL.
We concurrently entered into a new three year $6.0 million term loan agreement ("PFG Term Note") with Partners for Growth IV, L.P. ("PFG"). The PFG Term Note is an interest only loan with the full principal and any outstanding interest due at maturity on March 22, 2020. Interest is payable monthly at a rate of 11.5% per annum, with the possibility of reducing to 11.0% in 2018 based on achieving certain financial milestones set forth by PFG. We may prepay the PFG Term Note in whole or part at any time without penalty. We paid PFG a commitment fee of $120,000 at closing.

Both loan agreements require us to comply with certain financial covenants, including minimum adjusted EBITDA, revenue and liquidity covenants, and restrict us from, among other things, paying cash dividends, incurring debt and entering into certain transactions without the prior consent of the lenders. Repayment of amounts borrowed under the new loan agreements may be accelerated if an event of default occurs, which includes, among other things, a violation of such financial covenants and negative covenants.

Our obligations to SVB under the ABL facility are secured by a first priority security interest on substantially all of our assets, and our obligations under the PFG Term Note are secured by a second priority security interest subordinated to the SVB lien.

In connection with the PFG Term Note, we issued seven year warrants to the lenders to purchase an aggregate of 443,262 shares of our common stock at an exercise price of $2.82 per share. The number of warrants may be reduced by 20% subject to us achieving certain financial milestones set forth by PFG.

The following is a summary of long-term debt (in thousands):

	September 30, 2017	December 31, 2016
SVB Term Note, repaid in 2017	$ —	$ 4,667
PFG Term Note, net of discount of $865	5,135	—
Less unamortized debt issuance costs	199	13
Term notes, net	4,936	4,654
Less current maturities	—	2,000
Long-term portion	$ 4,936	$ 2,654

At September 30, 2017, the principal amount of the PFG Term Note of $6,000,000 is due in 2020.

Note 7. Stock-Based Compensation

We have two equity incentive plans: the 2008 Stock Option Plan (the "2008 Plan") and the 2011 Equity Incentive Plan (the "2011 Plan", and together with the 2008 Plan, the "Stock Option Plans"). The Stock Option Plans are meant to provide additional incentive to officers, employees and consultants to remain in our employment. Options granted are generally exercisable for up to 10 years.

At September 30, 2017, 391,317 shares remain available for future awards under the 2011 Plan and 134,354 shares remain available for future awards under the 2008 Plan.

A summary of employee and non-employee stock option activity for the nine months ended September 30, 2017 is as follows:

	Options Outstanding		Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
	Number of Shares (in thousands)	Weighted-Average Exercise Price		
Outstanding January 1, 2017	2,198	$ 9.09	7.04	$ —
Granted	860	2.87		
Exercised	(3)	2.23		
Cancelled or expired	(239)	10.80		
Outstanding September 30, 2017	2,816	$ 7.05	7.19	$ 367
Exercisable September 30, 2017	1,533	$ 9.54	5.69	$ 76

Aggregate intrinsic value represents the difference between the fair value of our common stock and the exercise price of outstanding, in-the-money options. During the three and nine months ended September 30, 2017, the Company received approximately $2,500 and $6,500, respectively, from the exercise of options.

As of September 30, 2017, total unrecognized compensation cost related to non-vested stock options granted to employees was $2,865,963 which we expect to recognize over the next 2.32 years.

As of September 30, 2017, total unrecognized compensation cost related to non-vested stock options granted to non-employees was $12,625 which we expect to recognize over the next 0.25 years. The estimate of unrecognized non-employee compensation is based on the fair value of the non-vested options as of September 30, 2017.

The fair value of options granted to employees is estimated on the grant date using the Black-Scholes option valuation model. This valuation model requires us to make assumptions and judgments about the variables used in the calculation, including the expected term (the period of time that the options granted are expected to be outstanding), the volatility of our common stock, a risk-free interest rate, and expected dividends. To the extent actual forfeitures differ from the estimates, the difference will be recorded as a cumulative adjustment in the period estimates are revised. No compensation cost is recorded for options that do not vest. We use the simplified calculation of expected life described in the SEC's Staff Accounting Bulletin No. 107, *Share-Based Payment*, and volatility is based on the historical volatility of our common stock. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option. We use an expected dividend yield of zero, as we do not anticipate paying any dividends in the foreseeable future. Forfeitures will be recorded when they occur.

The following table presents the weighted-average assumptions used to estimate the fair value of options granted to employees during the periods presented:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	**2017**	2016
Volatility	**75.28%**	74.30%	**74.60%**	74.30%
Risk free interest rate	**1.92%**	1.17%	**1.97%**	1.17%
Dividend yield	**0.00%**	0.00%	**0.00%**	0.00%
Term (years)	**5.73**	5.92	**5.90**	5.92
Weighted-average fair value of options granted during the period	**1.91**	1.30	**1.89**	1.30

In May 2014, we issued 200,000 options to our Director, Raju Chaganti, with an exercise price of $15.89. See Note 12 for additional information. The following table presents the weighted-average assumptions used to estimate the fair value of options reaching their measurement date for non-employees during the periods presented:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	**2017**	2016
Volatility	**74.39%**	72.97%	**76.06%**	74.50%
Risk free interest rate	**2.17%**	1.46%	**2.19%**	1.43%
Dividend yield	**0.00%**	0.00%	**0.00%**	0.00%
Term (years)	**6.64**	7.64	**6.89**	7.89

Restricted stock awards have been granted to employees, directors and consultants as compensation for services. At September 30, 2017, there was $383,829 of unrecognized compensation cost related to non-vested restricted stock granted to employees and directors; we expect to recognize the cost over 1.50 years.

The following table summarizes the activities for our non-vested restricted stock awards for the nine months ended September 30, 2017:

	Non-vested Restricted Stock Awards	
	Number of Shares (in thousands)	**Weighted-Average Grant Date Fair Value**
Non-vested at January 1, 2017	80	$ 6.30
Granted	65	3.29
Vested	(30)	8.30
Non-vested at September 30, 2017	115	$ 4.09

The following table presents the effects of stock-based compensation related to stock option and restricted stock awards to employees and non-employees on our Consolidated Statements of Operations during the periods presented (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	**2017**	2016
Cost of revenues	**$ 122**	$ 83	**$ 250**	$ 219
Research and development	**11**	45	**110**	140
General and administrative	**356**	356	**949**	1,095
Sales and marketing	**30**	30	**86**	84
Total stock-based compensation	**$ 519**	$ 514	**$ 1,395**	$ 1,538

Note 8. Warrants

On March 22, 2017, we issued seven year warrants to PFG and certain of its affiliates to purchase an aggregate of 443,262 shares of our common stock at an exercise price of $2.82 per share, in conjunction with our debt refinancing described in Note 5. The number of warrants may be reduced by 20% subject to us achieving certain financial milestones set forth by PFG. The warrants can be net settled in common stock using the average 90-trading day price of our common stock. These warrants are defined in the table below as 2017 Debt derivative warrants.

During the three and nine months ended September 30, 2017, the Company received approximately $56,000 and $1,827,000, respectively, from shareholders who exercised warrants to purchase 25,000 and 811,900 shares of common stock, respectively, at $2.25. In addition, on March 28, 2017, warrant holders exercised warrants to purchase 90,063 shares of common stock at an exercise price of $2.25 per share using the net issuance exercise method whereby 45,162 shares were surrendered as payment in full of the exercise price resulting in a net issuance of 44,901 shares.

The following table summarizes the warrant activity for the nine months ended September 30, 2017 (in thousands, except exercise price):

Issued With / For	Exercise Price		Warrants Outstanding January 1, 2017	2017 Warrants Issued	2017 Warrants Exercised	Warrants Outstanding September 30, 2017
Non-Derivative Warrants:						
Financing	$ 10.00		243	—	—	243
Financing	15.00		361	—	—	361
Debt guarantee	15.00		109	—	—	109
2015 Offering	5.00		3,450	—	—	3,450
Total non-derivative warrants	6.42	C	4,163	—	—	4,163
Derivative Warrants:						
2016 Offerings	2.25	A	2,870	—	(902)	1,968
2017 Debt	2.82	B	—	443	—	443
Total derivative warrants	2.35	C	2,870	443	(902)	2,411
Total	$ 4.93	C	7,033	443	(902)	6,574

A These warrants are subject to fair value accounting and contain a contingent net cash settlement feature.

B These warrants are subject to fair value accounting and contain a net settlement provision that uses the 90-trading day price of our common stock. These warrants are subject to a 20% reduction if certain financial milestones are met.

C Weighted-average exercise prices are as of September 30, 2017.

Note 9. Fair Value of Warrants

The following table summarizes the derivative warrant activity subject to fair value accounting for the nine months ended September 30, 2017 (in thousands):

Issued with/for	Fair value of warrants outstanding as of December 31, 2016	Fair value of warrants issued	Fair value of warrants exercised	Change in fair value of warrants	Fair value of warrants outstanding as of September 30, 2017
2016 Offerings	$ 2,018	$ —	$ (2,782)	$ 4,107	$ 3,343
2017 Debt	—	1,004	—	(180)	824
	$ 2,018	$ 1,004	$ (2,782)	$ 3,927	$ 4,167

The derivative warrants issued as part of the 2016 Offerings are valued using a probability-weighted Binomial model, while the derivative warrants issued as part of the 2017 Debt refinancing are valued using a Monte Carlo model. The following tables summarize the assumptions used in computing the fair value of derivative warrants subject to fair value accounting at the date of issue or exercise during the three and nine months ended September 30, 2017 and 2016, and at September 30, 2017 and December 31, 2016.

	Issued During the		Exercised During the			
2016 Offerings	Three Months Ended September 30, 2016	Nine Months Ended September 30, 2016	Three Months Ended September 30, 2017	Nine Months Ended September 30, 2017	As of September 30, 2017	As of December 31, 2016
Exercise price	$ 2.25	$ 2.25	$ 2.25	$ 2.25	$ 2.25	$ 2.25
Expected life (years)	5.50	5.50	4.30	4.78	4.33	5.06
Expected volatility	73.28%	74.36%	74.20%	76.24%	75.07%	72.82%
Risk-free interest rate	1.21%	1.30%	1.81%	1.94%	1.92%	1.93%
Expected dividend yield	—%	—%	—%	—%	—%	—%

2017 Debt	Issued During the Nine Months Ended September 30, 2017	As of September 30, 2017
Exercise price	$ 2.82	$ 2.82
Expected life (years)	7.00	6.48
Expected volatility	74.61 %	74.07%
Risk-free interest rate	2.22 %	2.16%
Expected dividend yield	— %	—%

Note 10. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The Fair Value Measurements and Disclosures Topic of the FASB ASC requires the use of valuation techniques that are consistent with the market approach, the income approach and/or the cost approach. Inputs to valuation techniques refer to the assumptions that market participants would use in pricing the asset or liability. Inputs may be observable, meaning those that reflect the assumptions market participants would use in pricing the asset or liability developed based on market data obtained from independent sources, or unobservable, meaning those that reflect our own assumptions about the assumptions market participants would use in pricing the asset or liability developed based on the best information available in the circumstances. In that regard, the Topic establishes a fair value hierarchy for valuation inputs that give the highest priority to quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. The fair value hierarchy is as follows:

Level 1: Quoted prices (unadjusted) for identical assets or liabilities in active markets that we have the ability to access as of the measurement date.

Level 2: Significant other observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data.

Level 3: Significant unobservable inputs that reflect our own assumptions about the assumptions that market participants would use in pricing an asset or liability.

The following table summarizes the financial liabilities measured at fair value on a recurring basis segregated by the level of valuation inputs within the fair value hierarchy utilized to measure fair value (in thousands):

	September 30, 2017			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Warrant liability	**$ 4,167**	**$ —**	**$ —**	**$ 4,167**
Note payable	**228**	—	—	**228**
	$ 4,395	**$ —**	**$ —**	**$ 4,395**

	December 31, 2016			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Warrant liability	$ 2,018	$ —	$ —	$ 2,018
Note payable	114	—	—	114
	$ 2,132	$ —	$ —	$ 2,132

The ultimate payment to VenturEast will be the value of 84,278 shares of common stock at the time of payment. The value of the note payable to VenturEast was determined using the fair value of our common stock. During the three months ended

September 30, 2017 and 2016, we recognized a gain of approximately $105,000 and $18,000, respectively, due to the change in value of the note. During the nine months ended September 30, 2017 and 2016, we recognized a loss of approximately $114,000 and a gain of approximately $119,000, respectively, due to the change in value of the note.

At September 30, 2017, the warrant liability consists of stock warrants issued as part of the 2016 Offerings that contain contingent redemption features and warrants issued as part of the debt refinancing outlined in Note 6. In accordance with derivative accounting for warrants, we calculated the fair value of these warrants, and the assumptions used are described in Note 9, “Fair Value of Warrants.” During the three months ended September 30, 2017 and 2016, we recognized gains of approximately $2,790,000 and $712,000, respectively, on the derivative warrants due to the decrease in our stock price. During the nine months ended September 30, 2017, we recognized a loss of approximately $3,927,000 on the derivative warrants due to changes in our stock price. During the nine months ended September 30, 2016, we recorded a gain of approximately $712,000 on the derivative warrants due to changes in our stock price. During the nine months ended September 30, 2016, we also recorded a gain of approximately $17,000 due to the expiration of derivative warrants outstanding at December 31, 2015.

Realized and unrealized gains and losses related to the change in fair value of the VenturEast note and warrant liability are included in other income (expense) on the Consolidated Statements of Operations.

The following table summarizes the activity of the note payable to VenturEast and of our derivative warrants, which was measured at fair value using Level 3 inputs (in thousands):

	Note Payable to VenturEast	Warrant Liability
Fair value at December 31, 2016	$ 114	$ 2,018
Fair value of warrants issued	—	1,004
Fair value of warrants exercised	—	(2,782)
Change in fair value	114	3,927
Fair value at September 30, 2017	$ 228	$ 4,167

Note 11. Joint Venture Agreement

In November 2011, we entered into an affiliation agreement with the Mayo Foundation for Medical Education and Research (“Mayo”), subsequently amended. Under the agreement, we formed a joint venture with Mayo in May 2013 to focus on developing oncology diagnostic services and tests utilizing next generation sequencing. The joint venture is a limited liability company, with each party initially holding fifty percent of the issued and outstanding membership interests of the new entity (the “JV”).

The agreement requires aggregate capital contributions by us of up to $6.0 million, of which $2.0 million has been paid to date. The timing of the remaining installments is subject to the JV's achievement of certain operational milestones agreed upon by the board of governors of the JV. In exchange for its membership interest, Mayo’s capital contribution takes the form of cash, staff, services, hardware and software resources, laboratory space and instrumentation, the fair market value of which will be approximately equal to $6.0 million. Mayo’s continued contribution will also be conditioned upon the JV’s achievement of certain milestones.

Our share of the JV’s net loss was approximately $2,000 and $18,000 for the three months ended September 30, 2017 and 2016, and approximately $21,000 and $45,000 for the nine months ended September 30, 2017 and 2016, respectively, and is included in research and development expense on the Consolidated Statements of Operations. We have a net receivable due from the JV of approximately $10,000 at September 30, 2017, which is included in other assets in the Consolidated Balance Sheets.

The joint venture is considered a variable interest entity under ASC 810-10, but we are not the primary beneficiary as we do not have the power to direct the activities of the JV that most significantly impact its performance. Our evaluation of ability to impact performance is based on our equal board membership and voting rights and day-to-day management functions which are performed by the Mayo personnel.

Note 12. Related Party Transactions

We have a consulting agreement with Equity Dynamics, Inc. (“EDI”), an entity controlled by John Pappajohn, effective April 1, 2014 pursuant to which EDI receives a monthly fee of $10,000. Total expenses for each of the three months ended September 30, 2017 and 2016 were $30,000. Total expenses for each of the nine months ended September 30, 2017 and 2016 were $90,000. As of September 30, 2017, we owed EDI $20,000.

In 2010, we entered into a three-year consulting agreement with Dr. Chaganti, which was subsequently renewed through December 31, 2016 pursuant to which Dr. Chaganti received $5,000 per month for providing consulting and technical support services. Pursuant to the terms of the renewed consulting agreement, Dr. Chaganti received an option to purchase 200,000 shares of our common stock at a purchase price of $15.89 per share vesting over a period of four years. Total non-cash stock-based compensation recognized under the consulting agreement for the three months ended September 30, 2017 and 2016 was $12,625 and $7,125, respectively. Total non-cash stock-based compensation recognized under the consulting agreement for the nine months ended September 30, 2017 and 2016 was $62,125 and $32,750, respectively. Also pursuant to the consulting agreement, Dr. Chaganti assigned to us all rights to any inventions which he may invent during the course of rendering consulting services to us. In exchange for this assignment, if the USPTO issues a patent for an invention on which Dr. Chaganti is listed as an inventor, we are required to pay Dr. Chaganti (i) a one-time payment of $50,000 and (ii) 1% of any net revenues we receive from any licensed sales of the invention. In the first quarter of 2016, we paid Dr. Chaganti $50,000 which was recognized as an expense in fiscal 2015 when one patent was issued.

Note 13. Contingencies

In the normal course of business, the Company may become involved in various claims and legal proceedings. In the opinion of management, the ultimate liability or disposition thereof is not expected to have a material adverse effect on our financial condition, results of operations, or liquidity.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

As used herein, the “Company,” “we,” “us,” “our” or similar terms, refer to Cancer Genetics, Inc. and its wholly owned subsidiaries: Cancer Genetics Italia, S.r.l., Gentris, LLC and BioServe Biotechnologies (India) Private Limited, except as expressly indicated or unless the context otherwise requires. The following Management’s Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”) is intended to help facilitate an understanding of our financial condition and our historical results of operations for the periods presented. This MD&A should be read in conjunction with the audited consolidated financial statements and notes thereto included in our annual report on Form 10-K filed with the SEC on March 23, 2017. This MD&A may contain forward-looking statements that involve risks and uncertainties. See “Cautionary Note Regarding Forward-Looking Statements” below.

Overview

We are an emerging leader in the field of precision medicine, enabling individualized therapies in the field of oncology through our diagnostic products and services and molecular markers. We develop, commercialize and provide molecular- and biomarker-based tests and services that enable physicians to personalize the clinical management of each individual patient by providing genomic information to better diagnose, monitor and inform cancer treatment and that enable biotech and pharmaceutical companies engaged in oncology trials to better select candidate populations and reduce adverse drug reactions by providing information regarding genomic factors influencing subject responses to therapeutics. We have a comprehensive, disease-focused oncology testing portfolio. Our tests and techniques target a wide range of cancers, covering nine of the top ten cancers in prevalence in the United States, with additional unique capabilities offered by our FDA-cleared Tissue of Origin® test for identifying difficult to diagnose tumor types or poorly differentiated metastatic disease.

Our vision is to become the oncology diagnostics partner for biopharmaceutical companies and clinicians by participating in the entire care continuum from bench to bedside. We believe the diagnostics industry is undergoing a rapid evolution in its approach to oncology testing, embracing precision medicine and individualized testing as a means to drive higher standards of patient treatment and disease management. Similarly, biopharmaceutical companies are increasingly engaging companies such as ours to provide information on clinical trial participants' molecular profiles in order to identify biomarker and genomic variations that may be responsible for differing responses to pharmaceuticals, and particularly to oncology drugs, thereby increasing the efficiency of trials while lowering related costs. We believe tailored therapeutics can revolutionize oncology medicine through molecular- and biomarker-based testing services, enabling physicians and researchers to target the factors that make each patient and disease unique.

Our services are performed at our state-of-the-art laboratories located in New Jersey, Pennsylvania, North Carolina, California, Shanghai (China), Victoria (Australia), and Hyderabad (India). Our laboratories comply with the highest regulatory standards

as appropriate for the services they deliver including CLIA, CAP, NY State, California State and NABL (India). Our services are built on a foundation of world-class scientific knowledge and intellectual property in solid and blood-borne cancers, as well as strong academic relationships with major cancer centers such as Memorial Sloan-Kettering, Mayo Clinic, and the National Cancer Institute.

Our clinical offerings include our portfolio of proprietary tests targeting hematological, urogenital and HPV-associated cancers, in conjunction with ancillary non-proprietary tests. Our proprietary tests target cancers that are difficult to prognose and predict treatment outcomes through currently available mainstream techniques. We provide our proprietary tests and services, along with a comprehensive range of non-proprietary oncology-focused tests and laboratory services, to oncologists and pathologists at hospitals, cancer centers, and physician offices, as well as biotech and pharmaceutical companies to support their clinical trials. Our proprietary tests are based principally on our expertise in specific cancer types, test development methodologies and proprietary algorithms correlating genetic events with disease specific information. Our portfolio primarily includes comparative genomic hybridization (CGH) microarrays and next generation sequencing (NGS) panels, and DNA fluorescent in situ hybridization (FISH) probes.

The non-proprietary testing services we offer are focused in part on specific oncology categories where we are developing our proprietary tests. We believe that there is significant synergy in developing and marketing a complete set of tests and services that are disease focused and delivering those tests and services in a comprehensive manner to help with treatment decisions.

The insight that we develop in delivering the non-proprietary services are often leveraged in the development of our proprietary programs and now increasingly in the validation of our proprietary programs, such as MatBA and Focus::NGS.

We expect to continue to incur significant losses for the near future. We incurred losses of $15.8 million and $20.2 million for fiscal years ended December 31, 2016 and 2015, respectively, and $13.0 million for the nine months ended September 30, 2017.

As of September 30, 2017, we had an accumulated deficit of $126.9 million.

Acquisitions

On August 15, 2017, we purchased all of the outstanding stock of vivoPharm, with its principal place of business in Victoria, Australia, in a transaction valued at approximately $1.2 million in cash, $9.5 million in the Company's common stock based on the closing price of the stock on August 15, 2017, plus an estimated accrued settlement of $345,000 for excess working capital. The Company has deposited in escrow 20% of the stock consideration until the expiration of twelve months from the closing date to serve as the initial source for any indemnification claims and adjustments.

vivoPharm is a contract research organization (“CRO”) that specializes in planning and conducting unique, specialized studies to guide drug discovery and development programs with a concentration in oncology and immuno-oncology. These studies range from early compound selection to developing comprehensive sets of in vitro and in vivo data, as needed for FDA Investigational New Drug (“IND”) applications. vivoPharm has developed industry recognized capabilities in early phase development and discovery, especially in immuno-oncology models, tumor micro-environment studies, specialized pharmacology services, and PDx (patient derived xenograft) model studies that support basic discovery, preclinical and phase 1 clinical trials.

vivoPharm maintains three international locations, enabling the company to access global market opportunities. The headquarters in Victoria, Australia, specializes in safety and toxicology studies, including mammalian, genetic and in vitro, along with bioanalytical services including immune-analytical capabilities. vivoPharm’s U.S. based lab, located at the Hershey Center for Applied Research in Hershey, Pennsylvania, primarily focuses on screening and efficacy testing for a wide range of pharmaceutical and chemical products. The third location, in Munich, Germany, hosts project management and marketing personnel. Further, vivoPharm brings to CGI an additional 38 employees, 16 of which are located in the U.S. and 17 in Australia, with expertise in early stage discovery services and pre-clinical testing.

vivoPharm’s studies have been utilized to support over 200 IND submissions to date across a range of therapeutic indications, including lymphomas, leukemia, GI-cancers, liver cancer, pancreatic cancer, non-small cell lung cancer, and other non-cancer rare diseases. vivoPharm is presently serving over forty biotechnology and pharmaceutical companies across five continents in over 55 studies and trials with highly specialized development, clinical and preclinical research. Over the past 10 years, vivoPharm has also generated an extensive library of human xenograft and syngeneic tumor models, including subcutaneous, orthotopic and metastatic models.

vivoPharm's specialized tumor and disease models, toxicology and pharmacology services and animal imaging capabilities provide CGI opportunities to deepen its relationships with existing biopharma customers through additional discovery and downstream molecular work, while also furthering CGI's previously announced initiative aimed at early-phase drug repurposing and drug rescue programs.

Key Factors Affecting our Results of Operations and Financial Condition

Our overall long-term growth plan is predicated on our ability to develop and commercialize our proprietary tests, penetrate the Biopharma community to achieve more revenue supporting clinical trials and develop and penetrate the Indian market. Our proprietary tests include CGH microarrays, NGS panels, and DNA FISH probes. We continue to develop additional proprietary tests. To facilitate market adoption of our proprietary tests, we anticipate having to successfully complete additional studies with clinical samples and publish our results in peer-reviewed scientific journals. Our ability to complete such studies is dependent upon our ability to leverage our collaborative relationships with leading institutions to facilitate our research and obtain data for our quality assurance and test validation efforts.

We believe that the factors discussed in the following paragraphs have had and are expected to continue to have a material impact on our results of operations and financial condition.

Revenues

Our revenue is primarily generated through our Clinical Services and Biopharma Services. Clinical Services can be billed to Medicare, another third party insurer or the referring community hospital or other healthcare facility or patients in accordance with state and federal law. Biopharma Services are billed to the customer directly. While we have agreements with our Biopharma clients, volumes from these clients are subject to the progression and continuation of the clinical trials which can impact testing volume. We also derive revenue from Discovery Services, which are services provided in the development of new testing assays and methods. Discovery Services are billed directly to the customer.

We have historically derived a significant portion of our revenue from a limited number of test ordering sites, although the test ordering sites that generate a significant portion of our revenue have changed from period to period. Test ordering sites account for all of our Clinical Services revenue along with a portion of the Biopharma Services revenue. Our test ordering sites are hospitals, cancer centers, reference laboratories, physician offices and biopharmaceutical companies. Oncologists and pathologists at these sites order the tests on behalf of the needs of their oncology patients or as part of a clinical trial sponsored by a biopharmaceutical company in which the patient is being enrolled.

The top five test ordering sites during the three months ended September 30, 2017 and 2016 accounted for approximately 45% and 39% of our testing volumes, respectively. During the three months ended September 30, 2017, one Biopharma client accounted for approximately 11% of our revenue. During the three months ended September 30, 2016, one Biopharma client accounted for approximately 18% of our revenue.

The top five test ordering sites during the nine months ended September 30, 2017 and 2016 accounted for approximately 40% and 31% of our testing volumes, respectively. During the nine months ended September 30, 2017, there was one biopharmaceutical company which accounted for approximately 11% of our total revenue. During the nine months ended September 30, 2016, there was one biopharmaceutical company which accounted for approximately 10% of our total revenue.

We receive revenue for our Clinical Services from Medicare, other insurance carriers and other healthcare facilities. Some of our customers choose, generally at the beginning of our relationship, to pay for laboratory services directly as opposed to having patients (or their insurers) pay for those services and providing us with the patients' insurance information. A hospital may elect to be a direct bill customer and pay our bills directly, or may provide us with patient information so that their patients pay our bills, in which case we generally expect payment from their private insurance carrier or Medicare. In a few instances, we have arrangements where a hospital may have two accounts with us, so that certain tests are billed directly to the hospital, and certain tests are billed to and paid by a patient's insurer. The billing arrangements generally are dictated by our customers and in accordance with state and federal law.

For the three months ended September 30, 2017, Medicare accounted for approximately 11% of our total revenue, other insurance accounted for approximately 19% of our total revenue and other healthcare facilities accounted for 6% of our total revenue. For the nine months ended September 30, 2017, Medicare accounted for approximately 14% of our total revenue, other insurance accounted for approximately 22% of our total revenue and other healthcare facilities accounted for 5% of our total revenue. On average, we generate less revenue per test from other healthcare facilities billed directly, than from other insurance payers.

Cost of Revenues

Our cost of revenues consists principally of internal personnel costs, including stock-based compensation, laboratory consumables, shipping costs, overhead and other direct expenses, such as specimen procurement and third party validation studies. We are pursuing various strategies to reduce and control our cost of revenues, including automating our processes through more efficient technology and attempting to negotiate improved terms with our suppliers. With our three acquisitions in 2014 and 2015, we have made significant progress with integrating our resources and services in an effort to reduce costs. With our acquisition of vivoPharm in the third quarter of 2017, we are working to integrate its business and reduce costs. We will continue to assess other possible advantages to help us improve our cost structure.

Operating Expenses

We classify our operating expenses into three categories: research and development, sales and marketing, and general and administrative. Our operating expenses principally consist of personnel costs, including stock-based compensation, facility costs, outside services, laboratory consumables and overhead, development costs, marketing program costs and legal and accounting fees.

Research and Development Expenses. We incur research and development expenses principally in connection with our efforts to develop our proprietary tests. Our primary research and development expenses consist of direct personnel costs, laboratory equipment and consumables and overhead expenses. In 2013, we entered into a joint venture with the Mayo Foundation for Medical Education and Research, with a focus on developing oncology diagnostic services and tests utilizing next generation sequencing. These efforts have continued. All research and development expenses are charged to operations in the periods they are incurred.

General and Administrative Expenses. General and administrative expenses consist principally of personnel-related expenses, professional fees, such as legal, accounting and business consultants, occupancy costs, bad debt and other general expenses. We have experienced decreases in our general and administrative expenses but anticipate increases as we expand our business operations.

Sales and Marketing Expenses. Our sales and marketing expenses consist principally of personnel and related overhead costs for our sales team and their support personnel, travel and entertainment expenses, and other selling costs including sales collaterals and trade shows. We expect our sales and marketing expenses to increase as we expand into new geographies and add new clinical tests and services.

Seasonality

Our business experiences decreased demand during spring vacation season, summer months and the December holiday season when patients are less likely to visit their health care providers. We expect this trend in seasonality to continue for the foreseeable future.

Results of Operations

Three Months Ended September 30, 2017 and 2016

The following table sets forth certain information concerning our results of operations for the periods shown:

(dollars in thousands)	Three Months Ended September 30, 2017	2016	Change $	Change %
Revenue	**$ 8,028**	$ 6,750	$ 1,278	19 %
Cost of revenues	**4,588**	4,444	144	3 %
Research and development expenses	**981**	1,594	(613)	(38)%
General and administrative expenses	**4,346**	3,701	645	17 %
Sales and marketing expenses	**1,301**	1,054	247	23 %
Loss from operations	**(3,188)**	(4,043)	855	(21)%
Interest income (expense)	**(340)**	(107)	(233)	218 %
Change in fair value of acquisition note payable	**105**	18	87	483 %
Change in fair value of warrant liability	**2,790**	712	2,078	292 %
Other expense	**—**	(325)	325	(100)%
Net (loss)	**$ (633)**	$ (3,745)	$ 3,112	(83)%

Non-GAAP Financial Information

In addition to disclosing financial results in accordance with United States generally accepted accounting principles ("GAAP"), the table below contains non-GAAP financial measures that we believe are helpful in understanding and comparing our past financial performance and our future results. The non-GAAP financial measures disclosed by the Company exclude the non- operating changes in the fair value of derivative instruments. These non-GAAP financial measures should not be considered a substitute for, or superior to, financial measures calculated in accordance with GAAP, and the financial results calculated in accordance with GAAP and reconciliations from these results should be carefully evaluated. Management believes that these non-GAAP measures provide useful information about the Company's core operating results and thus are appropriate to enhance the overall understanding of the Company's past financial performance and its prospects for the future. The non-GAAP financial measures in the table below include adjusted net (loss) and the related adjusted basic and diluted net (loss) per share amounts.

Reconciliation from GAAP to Non-GAAP Results (in thousands, except per share amounts):

	Three Months Ended September 30, 2017	2016
Reconciliation of net (loss):		
Net (loss)	**$ (633)**	$ (3,745)
Adjustments:		
Change in fair value of acquisition note payable	**(105)**	(18)
Change in fair value of warrant liability	**(2,790)**	(712)
Adjusted net (loss)	**$ (3,528)**	$ (4,475)
Reconciliation of basic net (loss) per share:		
Basic net (loss) per share	**$ (0.03)**	$ (0.23)
Adjustments to net (loss)	**(0.13)**	(0.04)
Adjusted basic net (loss) per share	**$ (0.16)**	$ (0.27)
Basic weighted-average shares outstanding	**21,577**	16,519
Reconciliation of diluted net (loss) per share:		
Diluted net (loss) per share	**$ (0.15)**	$ (0.23)
Adjustments to net (loss)	**(0.01)**	(0.04)
Adjusted diluted net (loss) per share	**$ (0.16)**	$ (0.27)
Diluted weighted-average shares outstanding	**22,359**	16,519

Adjusted net (loss) decreased 21% to $3.5 million during the three months ended September 30, 2017, down from an adjusted net (loss) of $4.5 million during the three months ended September 30, 2016. Adjusted basic net (loss) per share decreased 41% to $0.16 during the three months ended September 30, 2017, down from $0.27 during the three months ended September 30,

2016. Adjusted diluted net (loss) per share decreased 41% to $0.16 during the three months ended September 30, 2017, down from $0.27 during the three months ended September 30, 2016.

Revenue

The breakdown of our revenue is as follows:

	Three Months Ended September 30,				Change	
	2017		2016			
(dollars in thousands)	**$**	**%**	**$**	**%**	**$**	**%**
Biopharma Services	**$ 4,168**	**52%**	$ 3,805	56%	$ 363	10%
Clinical Services	**2,880**	**36%**	2,687	40%	193	7%
Discovery Services	**980**	**12%**	258	4%	722	280%
Total Revenue	**$ 8,028**	**100%**	$ 6,750	100%	$ 1,278	19%

Revenue increased 19%, or $1.3 million, to $8.0 million for the three months ended September 30, 2017, from $6.8 million for the three months ended September 30, 2016, principally due to an increase in Discovery Services of $0.7 million and an increase in our Biopharma Services of $0.4 million. Our average revenue per test decreased to $376 per test for the three months ended September 30, 2017 from $397 per test for the three months ended September 30, 2016, principally due to the additional Clinical Services volume from our Los Angeles facility, which yields lower average revenue per test. Test volume increased by 11% from 12,348 tests for the three months ended September 30, 2016 to 13,726 tests for the three months ended September 30, 2017.

Revenue from Biopharma Services increased 10%, or $0.4 million, to $4.2 million for the three months ended September 30, 2017, from $3.8 million for the three months ended September 30, 2016 due to completing more studies from its top ten customers. Revenue from Clinical Services customers increased by $0.2 million, or 7%, compared to the three months ended September 30, 2016, due to increased clinical test volume. Revenue from Discovery Services increased 280%, or $0.7 million, during the three months ended September 30, 2017 due to the acquisition of vivoPharm, which accounted for $0.8 million of the increase.

Cost of Revenues

Cost of revenues increased 3%, or $0.1 million, for the three months ended September 30, 2017, principally due to increased payroll and benefit costs of $0.2 million offset by reduced costs of supplies used in our testing facilities of $0.1 million. Gross margin improved to 43% during the three months ended September 30, 2017 up from 34% for the three months ended September 30, 2016.

Operating Expenses

Research and development expenses decreased 38%, or $0.6 million, to $1.0 million for the three months ended September 30, 2017, from $1.6 million for the three months ended September 30, 2016, principally due to a $0.3 million decrease in payroll and benefit costs and a $0.3 million decrease in lab supplies used to validate new diagnostic tests and perform certain research and development projects.

General and administrative expenses increased 17%, or $0.6 million, to $4.3 million for the three months ended September 30, 2017, from $3.7 million for the three months ended September 30, 2016, principally due to an increase in our bad debt reserve of $0.7 million and an increase in payroll and other benefits of $0.3 million, offset by a $0.2 million decrease in facility costs resulting from the elimination of building management fees at our North Carolina location and decreased professional fees and taxes of $0.1 million each.

Sales and marketing expenses increased 23%, or $0.2 million, to $1.3 million for the three months ended September 30, 2017, from $1.1 million for the three months ended September 30, 2016, principally due to increased compensation costs of $0.3 million and offset by decreased facility costs of $0.1 million.

Interest Income (Expense)

Net interest expense increased 218%, or $0.2 million, to $0.3 million during the three months ended September 30, 2017 due to the higher effective interest rate on our refinanced debt.

Change in Fair Value of Acquisition Note Payable

The change in fair value of note payable resulted in approximately $105,000 and $18,000 of non-cash income for the three months ended September 30, 2017 and 2016, respectively. The fair value of the note representing part of the purchase price for BioServe decreased during the three months ended September 30, 2017 and 2016 as a consequence of a decrease in our stock price.

Change in Fair Value of Warrant Liability

Changes in fair value of some of our common stock warrants may impact our quarterly results. Accounting rules require us to record certain of our warrants as a liability, measure the fair value of these warrants each quarter and record changes in that value in earnings. As a result of a decrease in our stock price, we recognized non-cash income of $2.8 million and $0.7 million for the three months ended September 30, 2017 and 2016, respectively. In the future, if our stock price increases, with all other factors being equal, we would record a non-cash charge as a result of changes in the fair value of our common stock warrants. Alternatively, if the stock price decreases, with all other factors being equal, we may record non-cash income.

Other Expense

During the three months ended September 30, 2016, we expensed $0.3 million of offering costs associated with the derivative warrants issued in the 2016 Offerings.

Nine Months Ended September 30, 2017 and 2016

The following table sets forth certain information concerning our results of operations for the periods shown:

	Nine Months Ended September 30,		**Change**	
(dollars in thousands)	**2017**	2016	**$**	**%**
Revenue	**$ 21,598**	$ 19,819	$ 1,779	9 %
Cost of revenues	**12,831**	12,832	(1)	— %
Research and development expenses	**3,080**	4,806	(1,726)	(36)%
General and administrative expenses	**11,352**	11,677	(325)	(3)%
Sales and marketing expenses	**3,437**	3,731	(294)	(8)%
Loss from operations	**(9,102)**	(13,227)	4,125	(31)%
Interest income (expense)	**(760)**	(323)	(437)	135 %
Change in fair value of acquisition note payable	**(114)**	119	(233)	(196)%
Change in fair value of warrant liability	**(3,927)**	729	(4,656)	(639)%
Other income	**(46)**	(325)	279	(86)%
Loss before income taxes	**(13,949)**	(13,027)	(922)	7 %
Income tax provision (benefit)	**(970)**	—	(970)	n/a
Net (loss)	**$ (12,979)**	$ (13,027)	$ 48	— %

Non-GAAP Financial Information

In addition to disclosing financial results in accordance with United States generally accepted accounting principles (“GAAP”), the table below contains non-GAAP financial measures that we believe are helpful in understanding and comparing our past financial performance and our future results. The non-GAAP financial measures disclosed by the Company exclude the non- operating changes in the fair value of derivative instruments. These non-GAAP financial measures should not be considered a substitute for, or superior to, financial measures calculated in accordance with GAAP, and the financial results calculated in accordance with GAAP and reconciliations from these results should be carefully evaluated. Management believes that these non-GAAP measures provide useful information about the Company’s core operating results and thus are appropriate to enhance the overall understanding of the Company’s past financial performance and its prospects for the future. The non-GAAP financial measures in the table below include adjusted net (loss) and the related adjusted basic and diluted net (loss) per share amounts.

Reconciliation from GAAP to Non-GAAP Results (in thousands, except per share amounts):

	Nine Months Ended September 30,	
	2017	2016
Reconciliation of net (loss):		
Net (loss)	**$ (12,979)**	$ (13,027)
Adjustments:		
Change in fair value of acquisition note payable	**114**	(119)
Change in fair value of warrant liability	**3,927**	(729)
Adjusted net (loss)	**$ (8,938)**	$ (13,875)
Reconciliation of basic and diluted net (loss) per share:		
Basic and diluted net (loss) per share	**$ (0.65)**	$ (0.88)
Adjustments to net (loss)	**0.20**	(0.05)
Adjusted basic and diluted net (loss) per share	**$ (0.45)**	$ (0.93)
Basic and diluted weighted-average shares outstanding	**20,059**	14,868

Adjusted net (loss) decreased 36% to $8.9 million during the nine months ended September 30, 2017, down from an adjusted net (loss) of $13.9 million during the nine months ended September 30, 2016. Adjusted basic and diluted net (loss) per share decreased 52% to $0.45 during the nine months ended September 30, 2017, down from $0.93 during the nine months ended September 30, 2016.

The breakdown of our revenue is as follows:

	Nine Months Ended September 30,				Change	
	2017		2016			
(dollars in thousands)	**$**	**%**	**$**	**%**	**$**	**%**
Biopharma Services	**11,175**	**52%**	$ 11,374	57%	$ (199)	(2)%
Clinical Services	**8,887**	**41%**	7,685	39%	1,202	16 %
Discovery Services	**1,536**	**7%**	760	4%	776	102 %
Total Revenue	**$ 21,598**	**100%**	$ 19,819	100%	$ 1,779	9 %

Revenue increased 9%, or $1.8 million, to $21.6 million for the nine months ended September 30, 2017, from $19.8 million for the nine months ended September 30, 2016, principally due to an increase of $1.2 million in our Clinical Services and an increase in Discovery Services of $0.8 million, offset by a decrease of $0.2 million in our Biopharma Services. Our average revenue per test decreased to $378 per test for the nine months ended September 30, 2017 from $408 per test for the nine months ended September 30, 2016, principally due to the additional Clinical Services volume from our Los Angeles facility, which yields lower average revenue per test. Test volume increased by 12% from 36,156 tests for the nine months ended September 30, 2016 to 40,451 tests for the nine months ended September 30, 2017.

Revenue from Biopharma Services decreased 2%, or $0.2 million, to $11.2 million for the nine months ended September 30, 2017, from $11.4 million for the nine months ended September 30, 2016 due to completing fewer studies for its top ten customers. Revenue from Clinical Services customers increased by $1.2 million, or 16%, for the nine months ended September 30, 2017 due to increased volume in our clinical services laboratory operations in Los Angeles. Revenue from Discovery Services increased 102%, or $0.8 million, during the nine months ended September 30, 2017 due to our acquisition of vivoPharm, which accounted for all of the increase.

Cost of Revenues

Cost of revenues remained steady for the nine months ended September 30, 2017 and 2016. While lab supplies and facility costs both increased by $0.2 million during the nine months ended September 30, 2017, depreciation of equipment and outsourced labor decreased by $0.1 million and $0.2 million, respectively, during the nine months ended September 30, 2017. In addition, our shipping costs declined by $0.1 million during the nine months ended September 30, 2017. Gross margin improved to 41% during the nine months ended September 30, 2017 from 35% during the nine months ended September 30, 2016, as we continue to rationalize our cost structure from prior acquisitions and introduce greater efficiency in our laboratory operations.

Operating Expenses

Research and development expenses decreased 36%, or $1.7 million, to $3.1 million for the nine months ended September 30, 2017, from $4.8 million for the nine months ended September 30, 2016, principally due to reduced payroll and benefit costs of $0.7 million, decreased lab supplies of $0.7 million and reduced facility costs of $0.2 million.

General and administrative expenses decreased 3%, or $0.3 million, to $11.4 million for the nine months ended September 30, 2017, from $11.7 million for the nine months ended September 30, 2016, principally due to decreased facility costs of $0.6 million, decreased professional fess of $0.2 million, decreased miscellaneous expenses of $0.2 million and decreased franchise and property taxes of $0.2 million, partially offset by an increase in our bad debt reserve of $0.9 million.

Sales and marketing expenses decreased 8%, or $0.3 million, to $3.4 million for the nine months ended September 30, 2017, from $3.7 million for the nine months ended September 30, 2016, principally due to reduced travel and entertainment expenses of $0.2 million and decreased facility costs of $0.2 million.

Interest Income (Expense)

Net interest expense increased 135%, or $0.4 million, principally due to recognizing a loss on extinguishment of debt of $0.1 million in March 2017 and the higher effective interest rate on our refinanced debt.

Change in Fair Value of Acquisition Note Payable

The change in fair value of note payable resulted in $0.1 million in non-cash expense for the nine months ended September 30, 2017, as compared to non-cash income of $0.1 million for the nine months ended September 30, 2016. The fair value of the note representing part of the purchase price for BioServe increased during the nine months ended September 30, 2017 as a consequence of a increase in our stock price.

Change in Fair Value of Warrant Liability

Changes in fair value of some of our common stock warrants may impact our quarterly results. Accounting rules require us to record certain of our warrants as a liability, measure the fair value of these warrants each quarter and record changes in that value in earnings. As a result of an increase in our stock price, we recognized non-cash expense of $3.9 million for the nine months ended September 30, 2017. In the future, if our stock price increases, we would record a non-cash charge as a result of changes in the fair value of our common stock warrants. Consequently, we may be exposed to non-cash charges, or we may record non-cash income, as a result of this warrant exposure in future periods.

We recognized non-cash income of $0.7 million during the nine months ended September 30, 2016 due to changes in the fair value of the warrants issued in the 2016 Offerings and the expiration of other unexercised warrants.

Other Expense

During the nine months ended September 30, 2017 and 2016, we expensed $46,000 and $0.3 million of issuance costs associated with the derivative warrants issued as part of the 2017 debt refinancing and the 2016 Offerings, respectively.

Liquidity and Capital Resources

Sources of Liquidity

Our primary sources of liquidity have been funds generated from our debt financings and equity financings. In addition, we have generated funds from the following sources: (i) cash collections from customers and (ii) cash received from sale of state NOL's.

In general, our primary uses of cash are providing for operating expenses, working capital purposes and servicing debt. As of September 30, 2017, we have up to $4.0 million of available borrowings from our line of credit with Silicon Valley Bank, and we are able to sell shares to Aspire Capital.

Aspire Capital

On August 14, 2017, we entered into a Common Stock Purchase Agreement (the "Purchase Agreement") with Aspire Capital Fund, LLC, an Illinois limited liability company ("Aspire Capital"), which provides that Aspire Capital is committed to purchase up to an aggregate of $16.0 million of our common stock (the "Purchase Shares") from time to time over the term of the Purchase Agreement. Aspire Capital made an initial purchase of 1,000,000 Purchase Shares (the "Initial Purchase") at a purchase price of $3.00 per share on the commencement date of the agreement.

After the commencement date, on any business day over the 24-month term of the Purchase Agreement, we have the right, in our sole discretion, to present Aspire Capital with a purchase notice (each, a "Purchase Notice") directing Aspire Capital to purchase up to 33,333 Purchase Shares per business day, provided that Aspire Capital will not be required to buy Purchase Shares pursuant to a Purchase Notice that was received by Aspire Capital on any business day on which the last closing trade price of our common stock on the NASDAQ Capital Market is below $3.00. The Company and Aspire Capital also may mutually agree to increase the number of shares that may be sold to as much as an additional 2,000,000 Purchase Shares per business day. The purchase price per Purchase Share will be $3.00. As consideration for entering into the Purchase Agreement, we issued 320,000 shares of our common stock to Aspire Capital ("Commitment Shares").

The number of Purchase Shares covered by and timing of each Purchase Notice are determined by us, at our sole discretion. The aggregate number of shares that we can sell to Aspire Capital under the Purchase Agreement may in no case exceed 3,938,213 shares of our common stock (which is equal to approximately 19.9% of the common stock outstanding on the date of the Purchase Agreement), including the 320,000 Commitment Shares and the 1,000,000 Initial Purchase Shares, unless shareholder approval is obtained to issue additional shares.

Our net proceeds will depend on several factors, including the frequency of our sales of Purchase Shares to Aspire Capital and the frequency at which the last closing trade price of our common stock is below $3.00, subject to a maximum of $16.0 million in gross proceeds, including the Initial Purchase. Our delivery of Purchase Notices will be made subject to market conditions, in light of our capital needs from time to time and under the limitations contained in the Purchase Agreement. We currently intend to use the net proceeds from sales of Purchase Shares for general corporate purposes and working capital requirements.

As of September 30, 2017, the Company has sold 1,000,000 shares under this agreement at $3.00 per share, resulting in proceeds of approximately $2,965,000, net of offering costs of approximately $35,000. The Company has also issued 320,000 shares as consideration for entering into the Purchase Agreement. The Company has not deferred any offering costs associated with this agreement.

Cash Flows

Our net cash flow from operating, investing and financing activities for the periods below were as follows:

	Nine Months Ended September 30,	
(in thousands)	**2017**	2016
Cash provided by (used in):		
Operating activities	**$ (10,249)**	$ (17,299)
Investing activities	**(2,121)**	(472)
Financing activities	**7,675**	9,028
Net (decrease) in cash and cash equivalents	**$ (4,695)**	$ (8,743)

We had cash and cash equivalents of $4.8 million at September 30, 2017, and $9.5 million at December 31, 2016.

The $4.7 million decrease in cash and cash equivalents for the nine months ended September 30, 2017, principally resulted from net cash used in operations of $10.2 million, principal payments made on the Silicon Valley Bank term note of $4.7 million and fixed asset additions of $1.2 million, partially offset by proceeds from the exercise of warrants of $1.8 million, net proceeds from the sale of stock to Aspire Capital of $3.0 million, proceeds from refinancing our debt of $6.0 million and borrowings on our line of credit of $2.0 million.

The $8.7 million decrease in cash and cash equivalents for the nine months ended September 30, 2016, principally resulted from $17.3 million of net cash used in operations, partially offset by $10.0 million of net proceeds from the 2016 Offerings.

At September 30, 2017, we had total indebtedness of $8.0 million, excluding capital lease obligations.

Cash Used in Operating Activities

Net cash used in operating activities was $10.2 million for the nine months ended September 30, 2017. We used $4.7 million in net cash to fund our core operations, which included $0.6 million in cash paid for interest. We incurred additional uses of cash when adjusting for working capital items as follows: a net increase in accounts receivable of $4.0 million, an increase in other current assets of $0.6 million, a net decrease in accounts payable, accrued expenses and deferred revenue of $1.1 million and a decrease in deferred rent payable and other of $0.1 million, offset by a decrease in other assets of $0.3 million.

For the nine months ended September 30, 2016, we used $17.3 million in operating activities. We used $10.5 million in net cash to fund our core operations, which included $0.3 million in cash paid for interest. We incurred additional uses of cash when adjusting for working capital items as follows: a net increase in accounts receivable of $7.1 million and an increase in other current assets of $0.1 million, offset by a net increase in accounts payable, accrued expenses and deferred revenue of $0.4 million.

Cash Used in Investing Activities

Net cash used in investing activities was $2.1 million for the nine months ended September 30, 2017 and resulted from the purchase of fixed assets of $1.2 million, patent costs of $0.1 million, net cash paid to acquire vivoPharm of $0.7 million and investing $0.2 million in a cost method investment.

Net cash used in investing activities was $0.5 million for the nine months ended September 30, 2016 and resulted from the purchase of fixed assets of $0.3 million and patent costs of $0.1 million.

Cash Provided by Financing Activities

Net cash provided by financing activities was $7.7 million for the nine months ended September 30, 2017 and principally resulted from proceeds received from warrants exercised of $1.8 million, proceeds from the sale of stock to Aspire Capital of $3.0 million net of certain offering costs, proceeds from refinancing our debt of $6.0 million and proceeds from borrowing $2.0 million on our line of credit, offset by principal payments made on our Silicon Valley Bank term note of $4.7 million, capital lease payments of $0.2 million and debt issuance costs and loan fees of $0.3 million related to our refinanced debt.

Net cash provided by financing activities was $9.0 million for the nine months ended September 30, 2016 and principally resulted from proceeds received in the 2016 Offerings of $10.0 million, offset by principal payments made on the bank term note of $0.8 million and capital lease payments of $0.1 million.

Capital Resources and Expenditure Requirements

We expect to continue to incur material operating losses in the near future. It may take several years, if ever, to achieve positive operational cash flow. We may need to raise additional capital to fund our current operations, to repay certain outstanding indebtedness and to fund expansion of our business to meet our long-term business objectives through public or private equity offerings, debt financings, borrowings or strategic partnerships coupled with an investment in our company or a combination thereof. If we raise additional funds through the issuance of convertible debt securities, or other debt securities, these securities could be secured and could have rights senior to those of our common stock. In addition, any new debt incurred by the Company could impose covenants that restrict our operations and increase our interest expense. The issuance of any new equity securities will also dilute the interest of our current stockholders. Given the risks associated with our business, including our unprofitable operating history and our ability to develop additional proprietary tests, additional capital may not be available when needed on acceptable terms, or at all. If adequate funds are not available, we will need to curb our expansion plans or limit our research and development activities, which would have a material adverse impact on our business prospects and results of operations.

We believe that our current cash, taken together with the borrowings available from the Silicon Valley Bank line of credit and the common stock purchase agreement with Aspire Capital Fund, LLC, will support operations for at least the next 12 months from the date of this report. We continue to explore opportunities for additional equity or debt financing, and we are taking steps to improve our operating cash flow. We can provide no assurances that our current actions will be successful or that any additional sources of financing will be available to us on favorable terms, if at all, when needed. Our forecast of the period of time through which our current financial resources will be adequate to support our operations and the costs to support our general and administrative, sales and marketing and research and development activities are forward-looking statements and involve risks and uncertainties.

We expect our sales and marketing, research and development and other general and administrative expenses to increase as we continue to expand our business.

Our forecast of the period of time through which our current financial resources will be adequate to support our operations and our expected operating expenses are forward-looking statements and involve risks and uncertainties. Actual results could vary materially and negatively as a result of a number of factors, including:

- our ability to achieve revenue growth and profitability;
- our ability to improve efficiency of billing and collection processes;
- our ability to obtain approvals for our new diagnostic tests;
- our ability to execute on our marketing and sales strategy for our tests and CRO services and gain acceptance of our tests and CRO services in the market;
- our ability to obtain adequate reimbursement from governmental and other third-party payors for our tests and services;
- the costs, scope, progress, results, timing and outcomes of the clinical trials of our tests;
- the costs of operating and enhancing our laboratory facilities;
- our ability to succeed with our cost control initiative;
- the timing of and the costs involved in regulatory compliance, particularly if the regulations change;
- the costs of maintaining, expanding and protecting our intellectual property portfolio, including potential litigation costs and liabilities;
- our ability to manage the costs of manufacturing our tests;
- our rate of progress in, and cost of research and development activities associated with, products in research and early development;
- the effect of competing technological and market developments;
- costs related to expansion;
- our ability to secure financing and the amount thereof; and
- other risks and uncertainties discussed in our annual report on Form 10-K for the year ended December 31, 2016, as updated in this quarterly report on Form 10-Q and other reports, as applicable, we file with the Securities and Exchange Commission.

We expect that our operating expenses may slightly increase as a result of our purchase of vivoPharm, but at a lesser rate than the expected increase in revenue. We expect our capital expenditures will slightly increase in the future as we expand our business. We plan to increase our sales and marketing headcount to promote our new clinical tests and services and to expand into new geographies and to continue our research and development expenditures associated with performing work with research collaborators, to expand our pipeline and to perform work associated with our research collaborations. For example, in 2011 we entered into an affiliation agreement to form a joint venture with the Mayo Foundation for Medical Education and Research pursuant to which we made an initial $1.0 million capital contribution in October 2013 and $1.0 million in the third quarter of 2014. We may make additional capital contributions of up to $4.0 million, subject to the joint venture entity's achievement of certain operational milestones. Until we can generate a sufficient amount of revenues to finance our cash requirements, which we may never do, we will need to raise additional capital to fund our operations.

Subject to the availability of financing, we may use significant cash to fund acquisitions.

In March 2017, we entered into a new line of credit with Silicon Valley Bank and refinanced our term note with a new lender, Partners for Growth. See Note 6 of Notes to Unaudited Consolidated Financial Statements included in Item 1 of this quarterly report on Form 10-Q. In August 2017, we entered into a common stock purchase agreement with Aspire Capital Fund, LLC. See Note 3 of Notes to Unaudited Consolidated Financial Statements included in Item 1 of this quarterly report on Form 10-Q.

Income Taxes

Over the past several years, we have generated operating losses in all jurisdictions in which we may be subject to income taxes. As a result, we have accumulated significant net operating losses and other deferred tax assets. Because of our history of losses and the uncertainty as to the realization of those deferred tax assets, a full valuation allowance has been recognized. We do not expect to report a benefit related to the deferred tax assets until we have a history of earnings, if ever, that would support the realization of our deferred tax assets. Utilization of these net operating loss carryforwards is subject to limitation due to ownership changes that may delay the utilization of a portion of the carryforwards.

Off-Balance Sheet Arrangements

Since inception, we have not engaged in any off-balance sheet activities as defined in Item 303(a)(4) of Regulation S-K.

Critical Accounting Policies and Significant Judgment and Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of our consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates based on historical experience and make various assumptions, which management believes to be reasonable under the circumstances, which form the basis for judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Section 107 of the JOBS Act provides that an "emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. In other words, an "emerging growth company" can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. However, we have chosen to "opt out" of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

The notes to our audited consolidated financial statements in our annual report on Form 10-K for the year ended December 31, 2016 contain a summary of our significant accounting policies. We consider the following accounting policies critical to the understanding of the results of our operations:

- Revenue recognition;
- Accounts receivable and bad debts;
- Stock-based compensation; and
- Warrant liability.

Cautionary Note Regarding Forward-Looking Statements

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995

This report on Form 10-Q contains forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 under Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include all statements that are not historical facts. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential," or the negative of those terms, and similar expressions and comparable terminology intended to identify forward-looking statements. These statements reflect our current views with respect to future events. There are a number of important factors that could cause the actual results to differ materially from those expressed in any forward-looking statement made by us. These factors include, but are not limited to:

- our ability to achieve profitability by increasing sales of our laboratory tests and services and to continually develop and commercialize novel and innovative diagnostic tests and services for cancer patients;
- our ability to improve efficiency of billing and collection processes;
- with respect to our Clinical Services, our ability to obtain reimbursement from governmental and other third-party payors for our tests and services;
- our ability clinically validate our pipeline of tests currently in development;
- our ability to execute on our marketing and sales strategy for our tests and CRO services and gain acceptance of our tests and CRO services in the market;
- our ability to keep pace with rapidly advancing market and scientific developments;
- our ability to satisfy U.S. (including FDA) and international regulatory requirements with respect to our tests and services, many of which are new and still evolving;
- our ability to raise additional capital to meet our liquidity needs;
- competition from clinical laboratory services companies, tests currently available or new tests that may emerge;
- our ability to maintain our clinical collaborations and enter into new collaboration agreements with highly regarded organizations in the cancer field so that, among other things, we have access to thought leaders in the field and to a robust number of samples to validate our tests;

- our ability to maintain our present customer base and obtain new customers;
- potential product liability or intellectual property infringement claims;
- our dependency on third-party manufacturers to supply or manufacture our products;
- our ability to attract and retain a sufficient number of scientists, clinicians, sales personnel and other key personnel with extensive experience in oncology, who are in short supply;
- our ability to obtain or maintain patents or other appropriate protection for the intellectual property in our proprietary tests and services;
- our dependency on the intellectual property licensed to us or possessed by third parties;
- our ability to expand internationally and launch our tests in emerging markets, such as India and Brazil;
- our ability to adequately support future growth; and
- the risk factors discussed in our annual report on Form 10-K for the year ended December 31, 2016, as updated in this quarterly report on Form 10-Q and other reports, as applicable, that we file with the Securities and Exchange Commission.

Given these uncertainties, you should not place undue reliance on these forward-looking statements. These forward-looking statements represent our estimates and assumptions only as of the date of this quarterly report on Form 10-Q and, except as required by law, we undertake no obligation to update or review publicly any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this quarterly report on Form 10-Q. You should read this quarterly report on Form 10-Q and the documents referenced herein and filed as exhibits completely and with the understanding that our actual future results may be materially different from what we expect.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We evaluated, under the supervision and with the participation of the principal executive officer and principal financial officer, the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities and Exchange Act of 1934 (“Exchange Act”), as amended, as of September 30, 2017, the end of the period covered by this report on Form 10-Q. Based on this evaluation, our President and Chief Executive Officer (principal executive officer) and our Chief Operating Officer (principal financial officer) have concluded that our disclosure controls and procedures were effective at the reasonable assurance level at September 30, 2017.

Disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act (i) is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and (ii) is accumulated and communicated to management, including the principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosures. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. Due to the inherent limitations of control systems, not all misstatements may be detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. Controls and procedures can only provide reasonable, not absolute, assurance that the above objectives have been met.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the three months ended September 30, 2017 that have materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

In the normal course of business, the Company may become involved in various claims and legal proceedings. In the opinion of management, the ultimate liability or disposition thereof is not expected to have a material adverse effect on our financial condition, results of operations, or liquidity.

Item 1A. Risk Factors

Except as set forth below, there have been no material changes to the risk factors disclosed in Part 1, Item 1A, of our annual report on Form 10-K for the year ended December 31, 2016.

Risks Related to the vivoPharm Acquisition

Any acquisition exposes a company to additional risks.

Acquisitions may entail numerous risks for Cancer Genetics, including:

- competing claims for capital resources;
- uncertainty regarding our ability to retain and grow relationships with vivoPharm's key customers;
- difficulties in assimilating acquired operations, technologies or products; and
- diversion of management's attention from our core business.

Our failure to successfully complete the integration of vivoPharm could have a material adverse effect on our business, financial condition and operating results.

Failure of the vivoPharm acquisition to achieve potential benefits could harm the business and operating results of the combined company.

We expect that the acquisition of the vivoPharm businesses will result in potential benefits for the combined company, the expansion of the number and geographic coverage of our sales and marketing team, stronger penetration into new biotechnology customers, an extended portfolio of capabilities which will differentiate us in the markets we serve, advancing our strategy of bench-to-bedside services, and bolstering our growth with a global customer base of biopharma partners. No assurance can be given that we will achieve any or all of these potential benefits. Even if we are able to achieve any of these potential benefits, we cannot predict with certainty when the benefits will occur, or to the extent to which they actually will be achieved. For example, the benefits from the acquisition may be offset by costs incurred in integrating the businesses. The failure to achieve anticipated benefits could harm the business, financial condition and operating results of the combined company.

If the market for the combined company's tests and services does not experience significant growth or if the combined company's tests and services do not achieve broad acceptance, the combined company's operations will suffer.

Cancer Genetics cannot accurately predict the future growth rate or the size of the market for the combined company's tests and services. The expansion of this market depends on a number of factors, such as:

- the results of clinical trials;
- the cost, performance and reliability of the combined company's tests and services, and the tests and services offered by competitors;
- customers' perceptions regarding the benefits of the combined company's test and services;
- customers' satisfaction with our tests and services; and
- marketing efforts and publicity regarding our tests and services.

If the combined company is unable to manage growth in its business, its prospects may be limited and its future results of operations may be adversely affected.

Any significant expansion such as the acquisition of vivoPharm may strain the combined company's managerial, financial and other resources. If the combined company is unable to manage its growth, its business, operating results and financial condition could be adversely affected. The combined company will need to improve continually its operations, financial and other

internal systems to manage its growth effectively, and any failure to do so may lead to inefficiencies and redundancies, and result in reduced growth prospects and diminished operational results.

Operating in multiple countries requires us to comply with different legal and regulatory requirements.

Other laws applicable to our international business include local clinical, employment, tax, privacy, data security, environmental and intellectual property protection laws and regulations. These requirements may differ significantly from the requirements applicable to our business in the U.S. and may require resources to accommodate, and may result in decreased operational efficiencies and performance. As these laws continue to evolve and if we expand to more jurisdictions or acquire new businesses, compliance will become more complex and expensive, and the risk of non-compliance will increase.

Compliance with complex foreign and U.S. laws and regulations that apply to our international operations increases our cost of doing business abroad, and violation of these laws or regulations may interfere with our ability to offer our tests and services competitively in one or more countries, expose us or our employees to fines and penalties, and result in the limitation or prohibition of our conduct of business.

The potential loss or delay of our large contracts or of multiple contracts could adversely affect our results.

Most of our Discovery Services clients can terminate our contracts upon 30 to 90 days notice. These clients may delay, terminate or reduce the scope of our contracts for a variety of reasons beyond our control, including but not limited to:

- decisions to forego or terminate a particular clinical trial;
- lack of available financing, budgetary limits or changing priorities;
- actions by regulatory authorities;
- production problems resultings in shortages of the drug being tested;
- failure of products being tested to satisfy safety requirements or efficacy criteria;
- unexpected or undesired clinical results for products;
- shift of business to a competitor or internal resources; or
- shut down of manufacturing facilities.

As a result, contract terminations, delays and alterations are a possible outcome in our Discovery Services business. In the event of termination, our contracts often provide for fees for winding down the project, but these fees may not be sufficient for us to maintain our margins, and termination may result in lower resource utilization rates. In addition, we may not realize the full benefits of our backlog of contractually committed services if our clients cancel, delay or reduce their commitments under our contracts with them, which may occur if, among other things, a client decides to shift its business to a competitor or revoke our status as a preferred provider. Thus, the loss or delay of a large contract or the loss or delay of multiple contracts could adversely affect our revenues and profitability. We believe the risk of loss or delay of multiple contracts potentially has greater effect where we are party to broader partnering arrangements with global biopharmaceutical companies.

Our financial results may be adversely affected if we underprice our contracts, overrun our cost estimates or fail to receive approval for or experience delays in documenting change orders.

Most of our Discovery Services contracts are either fee for service contracts or fixed-fee contracts. Our past financial results have been, and our future financial results may be, adversely impacted if we initially underprice our contracts or otherwise overrun our cost estimates and are unable to successfully negotiate a change order. Change orders typically occur when the scope of work we perform needs to be modified from that originally contemplated by our contract with the client. Modifications can occur, for example, when there is a change in a key clinical trial assumption or parameter or a significant change in timing. Where we are not successful in converting out-of-scope work into change orders under our current contracts, we bear the cost of the additional work. Such underpricing, significant cost overruns or delay in documentation of change orders could have a material adverse effect on our business, results of operations, financial condition or cash flows.

If we fail to perform our services in accordance with contractual requirements, regulatory standards and ethical considerations, we could be subject to significant costs or liability and our reputation could be harmed.

In connection with our Discovery Services business, we contract with biopharmaceutical companies to provide specialized services to assist them in planning and conducting unique, specialized studies to guide drug discovery and development programs with a concentration in oncology and immuno-oncology. Our services include monitoring clinical trials, data and laboratory analysis, electronic data capture and other related services. Such services are complex and subject to contractual requirements, regulatory standards and ethical considerations. If we fail to perform our services in accordance with these

requirements, regulatory agencies may take action against us for failure to comply with applicable regulations governing clinical trials. Clients may also bring claims against us for breach of our contractual obligations. Any such action could have a material adverse effect on our results of operations, financial condition and reputation.

Such consequences could arise if, among other things, the following occur:

Improper performance of our services. The performance of clinical development services is complex and time-consuming. For example, we may make mistakes in conducting a clinical trial that could negatively impact or obviate the usefulness of the clinical trial or cause the results of the clinical trial to be reported improperly. If the clinical trial results are compromised, we could be subject to significant costs or liability, which could have an adverse impact on our ability to perform our services. As examples:

- non-compliance generally could result in the termination of ongoing clinical trials or sales and marketing projects or the disqualification of data for submission to regulatory authorities;
- compromise of data from a particular clinical trial, such as failure to verify that informed consent was obtained from patients, could require us to repeat the clinical trial under the terms of our contract at no further cost to our client, but at a substantial cost to us; and
- breach of a contractual term could result in liability for damages or termination of the contract.

While we endeavor to contractually limit our exposure to such risks, improper performance of our services could have an adverse effect on our financial condition, damage our reputation and result in the cancellation of current contracts by or failure to obtain future contracts from the affected client or other clients.

Investigation of clients. From time to time, one or more of our clients are audited or investigated by regulatory authorities or enforcement agencies with respect to regulatory compliance of their clinical trials, programs or the marketing and sale of their drugs. In these situations, we have often provided services to our clients with respect to the clinical trials, programs or activities being audited or investigated, and we are called upon to respond to requests for information by the authorities and agencies. There is a risk that either our clients or regulatory authorities could claim that we performed our services improperly or that we are responsible for clinical trial or program compliance. If our clients or regulatory authorities make such claims against us and prove them, we could be subject to damages, fines or penalties. In addition, negative publicity regarding regulatory compliance of our clients' clinical trials, programs or drugs could have an adverse effect on our business and reputation.

Security breaches and unauthorized use of our IT systems and information, or the IT systems or information in the possession of our vendors, could expose us, our clients, our data suppliers or others to risk of loss.

We rely upon the security of our computer and communications systems infrastructure to protect us from cyberattacks and unauthorized access. Cyberattacks can include malware, computer viruses, hacking or other significant disruption of our computer, communications and related systems. Although we take steps to manage and avoid these risks and to prevent their recurrence, our preventive and remedial actions may not be successful. Such attacks, whether successful or unsuccessful, could result in our incurring costs related to, for example, rebuilding internal systems, defending against litigation, responding to regulatory inquiries or actions, paying damages or fines, or taking other remedial steps with respect to third parties. Publicity about vulnerabilities and attempted or successful incursions could damage our reputation with clients and data suppliers and reduce demand for our services.

We also store proprietary and sensitive information in connection with our business, which could be compromised by a cyberattack. To the extent that any disruption or security breach results in a loss or damage to our data, an inappropriate disclosure of proprietary or sensitive information, an inability to access data sources, or an inability to process data or provide our offerings to our clients, it could cause significant damage to our reputation, affect our relationships with our data suppliers and clients (including loss of suppliers and clients), lead to claims against us and ultimately harm our business. We may be required to incur significant costs to alleviate, remedy or protect against damage caused by these disruptions or security breaches in the future. We may also face inquiry or increased scrutiny from government agencies as a result of any such disruption or breach. While we have insurance coverage for certain instances of a cyber security breach, our coverage may not be sufficient if we suffer a significant attack or multiple attacks. Any such breach or disruption could have a material adverse effect on our operating results and our reputation as a provider of mission-critical services.

Some of our vendors have significant responsibility for the security of certain of our data centers and computer-based platforms. Also, our data suppliers have responsibility for security of their own computer and communications environments. These third parties face risks relating to cyber security similar to ours, which could disrupt their businesses and therefore materially impact ours. Accordingly, we are subject to any flaw in or breaches to their computer and communications systems

or those that they operate for us, which could result in a material adverse effect on our business, operations and financial results.

Current and proposed laws and regulations regarding the protection of personal data could result in increased risks of liability or increased cost to us or could limit our service offerings.

The confidentiality, collection, use and disclosure of personal data, including clinical trial patient-specific information, are subject to governmental regulation generally in the country that the personal data were collected or used. For example, United States federal regulations under Health Insurance Portability and Accountability Act of 1996 ("HIPAA") and as amended in 2014 by the Health Information Technology for Economic and Clinical Health ("HITECH") Act, require individuals' written authorization, in addition to any required informed consent, before Protected Health Information may be used for research. We are both directly and indirectly affected by the privacy provisions surrounding individual authorizations because many investigators with whom we are involved in clinical trials are directly subject to them as a HIPAA "covered entity" and because we obtain identifiable health information from third parties that are subject to such regulations. As there are some instances where we are a HIPAA "business associate" of a "covered entity," we can also be directly liable for mishandling protected health information. Under HIPAA's enforcement scheme, we can be subject to up to $1.5 million in annual civil penalties for each HIPAA violation.

In the EU personal data includes any information that relates to an identified or identifiable natural person with health information carrying additional obligations, including obtaining the explicit consent from the individual for collection, use or disclosure of the information. In addition, we are subject to EU rules with respect to cross-border transfers of such data out of the EU. The United States, the EU and its member states, and other countries where we have operations, such as Japan, South Korea, Malaysia, the Philippines, Russia and Singapore, continue to issue new privacy and data protection rules and regulations that relate to personal data and health information. Failure to comply with certain certification/registration and annual re-certification/registration provisions associated with these data protection and privacy regulations and rules in various jurisdictions, or to resolve any serious privacy complaints, could subject us to regulatory sanctions, criminal prosecution or civil liability. Federal, state and foreign governments are contemplating or have proposed or adopted additional legislation governing the collection, possession, use or dissemination of personal data, such as personal health information, and personal financial data as well as security breach notification rules for loss or theft of such data. Additional legislation or regulation of this type might, among other things, require us to implement new security measures and processes or bring within the legislation other personal data, each of which may require substantial expenditures or limit our ability to offer some of our services. Additionally, if we violate applicable laws, regulations or duties relating to the use, privacy or security of personal data, we could be subject to civil liability or criminal prosecution, be forced to alter our business practices and suffer reputational harm.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds from Sales of Registered Securities

Not applicable.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

See the Index to Exhibits following the signature page hereto, which Index to Exhibits is incorporated herein by reference.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Cancer Genetics, Inc.
(Registrant)

Date: November 13, 2017

/s/ Panna L. Sharma
Panna L. Sharma
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 13, 2017

/s/ John A. Roberts
John A. Roberts
Chief Operating Officer
(Principal Financial Officer)

Date: November 13, 2017

/s/ Igor Gitelman
Igor Gitelman
Chief Accounting Officer
(Principal Accounting Officer)

INDEX TO EXHIBITS

Exhibit No.	Description
2.1***	Stock Purchase Agreement, dated as of August 14, 2017, by and among the Company, the Trustee of The Brandt Family Trust, Sabine Brandt, Royal Melbourne Institute of Technology, South Australian Life Science Advancement Partnership, LP, vivoPharm Pty Ltd. ACN 106 101 615, the Shareholders' Representative party thereto, the Management Parties party thereto and certain other stockholders named therein (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on August 16, 2017).
4.1	Registration Rights Agreement, dated as of August 14, 2017, by and between the Company and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on August 16, 2017).
10.1	Common Stock Purchase Agreement, dated as of August 14, 2017, by and between the Company and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 16, 2017).
31.1	Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under The Securities Exchange Act of 1934, as amended *
31.2	Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under The Securities Exchange Act of 1934, as amended *
32.1	Certifications of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of The Sarbanes-Oxley Act of 2002 **
32.2	Certifications of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of The Sarbanes-Oxley Act of 2002 **
101	The following materials from the Registrant's quarterly report on Form 10-Q for the quarter ended September 30, 2017, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheet at September 30, 2017 (unaudited) and December 31, 2016, (ii) Consolidated Statements of Operations for the three and nine month periods ended September 30, 2017 and 2016 (unaudited), (iii) Consolidated Statements of Cash Flows for the nine month periods ended September 30, 2017 and 2016 (unaudited) and (iv) Notes to Consolidated Financial Statements (unaudited)

* Filed herewith.

** Furnished herewith.

*** The schedules and exhibits to the Stock Purchase Agreement have been omitted from this filing pursuant to Item 601(b)(2) of Regulation S-K under the Securities Act of 1933, as amended. Cancer Genetics agrees to furnish as a supplement a copy of any omitted schedules or exhibits to the Stock Purchase Agreement to the Securities and Exchange Commission upon request, provided that Cancer Genetics may request confidential treatment for any schedule or exhibit so furnished.

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Panna L. Sharma, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cancer Genetics, Inc. (the "Registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

b. any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: November 13, 2017

/s/ Panna L. Sharma

Panna L. Sharma
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John A. Roberts, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cancer Genetics, Inc. (the "Registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

b. any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: November 13, 2017

/s/ John A. Roberts

John A. Roberts
Chief Operating Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Cancer Genetics, Inc. (the "Company") on Form 10-Q for the quarter ended September 30, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Panna L. Sharma, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 13, 2017

/s/ Panna L. Sharma
Panna L. Sharma
President and Chief Executive Officer
(Principal Executive Officer)

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.

Exhibit 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Cancer Genetics, Inc. (the "Company") on Form 10-Q for the quarter ended September 30, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John A. Roberts, Chief Operating Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 13, 2017

/s/ John A. Roberts
John A. Roberts.
Chief Operating Officer
(Principal Financial Officer)

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.