

January 14, 2019

**Champions Oncology (Nasdaq/CSBR)**
**Robert M. Wasserman**  
 Senior Research Analyst  
 561-208-2905  
 rwasserman@dawsonjames.com

**BUY Two new products to fuel growth**
*Champions Oncology provides R&D solutions and services that improve the productivity of oncology drug development*
**Investment Highlights**

1) **Champions Oncology reported very strong quarterly earnings for their Q2/19 ending October 2018**, including revenue growth of 28.6% year-over-year to \$6.7 million, and positive net income of \$267,000 or \$0.02 per share, as compared to a net loss of \$94,000 or (\$0.01) per share in the previous year period. Revenue growth in the second quarter was led by both increased size and number of clinical oncology studies performed, similar to growth factors experienced in the previous quarter, as well as the initiation of new programs, for example the funded-model clinical partnership with AstraZeneca (AZN, Not Rated) signed in late 2017. The positive net income for second quarter was again the result of higher sales volumes, steady gross margins (to 48.4% from 49.0%), and operating efficiencies spurred by consolidation into new lab facilities as well as other initiatives. EBITDA, or net income after stock compensation and depreciation costs, improved to \$514,000 in Q2/19 from \$168,000 for the same period one year ago, and combined with stock option and warrant exercises made during the quarter (thanks to a higher stock price) the Company was able to improve its cash position to \$2.0 million at the end of October from \$1.0 million at the start of the period. In addition, the Company has no outstanding borrowings on its \$1.5 million line of credit.

2) **As was the case following first quarter results, Champions'.43 management again reiterated previous financial guidance of at least 20% annual growth for 2019 as a whole (ending April 2019), as well as expectations for continuing profitability on a quarterly basis.** Bearing recent financial guidance in mind as well as recent positive quarterly results, we are adjusting our estimates for Champions for fiscal 2019E slightly, to revenues of \$25.4 million, representing growth of 25.6% over fiscal 2018, and to net earnings of \$0.12 per share, as compared to a net loss of (\$0.14) per share in fiscal 2018. Our previous estimates had been revenues of \$25.2 million for 2019E (up 24.6% from 2018) and net income of \$0.15 per share. The

**Current Price \$9.43**
**Price Target \$16.00**

Estimates	F2017A	F2018A	F2019E
Revenues(\$000s)	\$15,412	\$20,241	\$25,418
1Q July	3,670	5,033 A	6,225 A
2Q October	4,457	5,203 A	6,693 A
3Q January	3,565	5,082 A	6,350 E
4Q April	3,720	4,923 A	6,150 E
EPS (basic)	(\$0.64)	(\$0.14)	\$0.12
1Q July	(0.26)	(0.06) A	0.04 A
2Q October	(0.05)	(0.01) A	0.02 A
3Q January	(0.13)	(0.01) A	0.03 E
4Q April	(0.22)	(0.06) A	0.03 E

EBITDA/Share	(\$0.38)	(\$0.01)	\$0.17
EVEBITDA (x)	N/A	N/A	54.1 X

Stock Data	
52-Week Range	\$3.05-\$17.90
Shares Outstanding (mil.)	11.3
Market Capitalization (mil.)	\$106.4
Enterprise Value (mil.)	\$104.4
Debt to Capital (10/18)	0.0%
Book Value/Share (10/18)	\$0.18
Price/Book	53.4 X
Average Trading Volume (3-month)	114,000
Insider Ownership	21.1%
Institutional Ownership	52.4%
Short interest	451,000
Dividend / Yield	\$0.00/0.0%

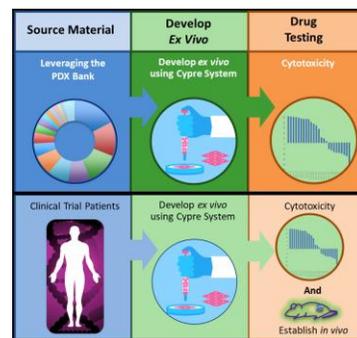


Price target and ratings changes over the past 3 yrs:  
 Initiated - May 15, 2018 - Buy - Price Target \$10  
 Update - September 21, 2018 - Buy - Price Target increased to \$16

primary difference in our new estimates are slightly lower earnings forecasts, due primarily to investments made recently to expand beyond core patient-derived xenograft (PDX) tumor model offerings into two new service offerings, clinical flow cytometry and ex-vivo platform services. (See further descriptions below) These new investments are expected to primarily impact higher overhead expenses going forward, including general and administrative costs and to a lesser extent cost of services, as the Company ramps up for the new services with new staffing and operational capability testing. On a quarterly basis for the remainder of the fiscal year, we are estimating that the Company will post year-over-year revenue growth of 25% on average and positive quarterly net income, very similar to results from Q2/19. Operating cash flow is expected to continue to be positive for the Company going forward.

**3) Champions has already launched one new service, Ex Vivo platform studies, and the Company is expected to launch another service offering, flow cytometry, this fiscal year.** The new Ex Vivo platform,

shown in a diagram to the right, is anticipated to be of particular value for larger accounts who desire to use and understand tumor models in their earlier stage clinical work. By leveraging source materials from the Company’s proprietary and market-leading TumorGrafts through Ex Vivo screening and by building custom tumor models, pharma firms will be able to employ autologous co-cultures to save time, lower costs and more accurately predict later-stage clinical performance of new compounds, particularly in the immuno-oncology area. The new Clinical Flow Cytometry service offerings take place at the other end of the drug development timeline, when patients are already in a clinical trial, and are expected to add relatively large contract awards primarily from existing customers, thus capturing a greater portion of the overall expenditures for a particular drug in development. The Company has recently signed a lease for new lab facilities to perform both services, which should aid in launching and growing these service offerings. Overall, hot new trends in the biotech space, including CAR-T therapeutics and CRISPR-based gene therapy pharmaceuticals, are expected to fuel growth in the industry, and Champions’ unique tumor-based models and associated service offerings position the Company well to take advantage of these trends.



**Conclusion**

While shares of CSBR have appreciated significantly since our May 2018 initiation, others in our eight-member group of comparable clinical research and oncology services revenue-stage stocks have performed very strongly as well, with an average rise of 40% in the past twelve months. Our comparable group, including Bio Life Solutions (BLFS, Not Rated), Bio-Techne (TECH, NR), Charles River Laboratories (CRL, NR), Enzo Biochem (ENZ, NR), NeoGenomics (NEO, NR), Pacific Biosciences (PACB, NR), PRA Health Services (PRAH, NR), and Repligen (RGEN, NR) trade at average price/revenue multiples of actual revenues for calendar 2017 and forecasted revenues for calendar 2018 well above Champions’ current valuation metrics for the same time periods (using four quarters ending January), thus suggesting CSBR shares are still undervalued vis-a-vis others in their industry.

However, with strong revenue growth, a recent rise to quarter profitability, a solid balance sheet and positive operating cash flow, and several major new initiatives recently launched, we believe both long-term value-oriented and short-term event-focused investors will soon discover these undervalued shares. Thus, we are maintaining our BUY rating on CSBR shares and 12-18-month price target of \$16 based on average industry price/revenue multiples for calendar 2017 and calendar 2018, multiplied by CSBR’s actual revenues for calendar 2017 and forecasted revenues for calendar 2018. (For further detail on our stock valuation analysis, please refer to our Initiation Report dated May 15, 2018 and Company Update dated September 21, 2018 for CSBR.)

## Risk Factors

**In addition to normal economic and market risk factors that impact most equities and the common risks shared by Champions Oncology with other companies in the industry, we believe an investment in CSBR involves the following risks:**

- **Reliance on key management** – At present, CSBR relies on several key members of its management team who have been in key executive positions for an extended period of time. Should one or more of these key executives leave the Company, CSBR could find it difficult to replace their long-standing knowledge of operations and industry expertise.
- **Reliance on future collaborations and partnerships** – To date, CSBR has signed several development collaboration and partnerships for its products and services. Oftentimes in the case of partnerships or joint ventures certain factors related to research and/or new product development may be determined by third parties and out of the control of Company management.
- **Limited stock liquidity** – Trading volume in CSBR on the Nasdaq exchange is comparatively light as these shares have a relatively limited history of trading compared with other healthcare stocks. As such, news regarding CSBR, its target market, partners and/or competitors could lead to significant volatility in the stock price.
- **Competitive markets** – The Company and its clients and collaborative partners compete in its target oncology services market with a number of companies, many of which are considerably larger than the Company. There can be no assurance that the Company and its partners will be able to successfully compete and launch new products and services into these competitive markets in the future.
- **FDA and regulatory risks** – CSBR and its partners and clients are subject to regulatory review for ongoing research and development as well as laboratory operations, including approval and review processes of the US Food and Drug Administration and other international regulatory agencies. In addition, the operation of the Company's facilities will be subject to ongoing oversight and regulation, and any negative correspondence from the FDA or other regulatory agencies in the future could have an adverse effect on the ongoing operations of the Company.
- **Lack of historic profitability** – CSBR has only recently achieved operating profitability on a quarterly basis, and previously had been operating at a loss. Although the Company maintains adequate cash reserves at the present time and we are forecasting that the Company will continue to operate on a profitable basis in the near future, there can be no assurance the Company will not need to raise additional working capital in the future should operating losses resume or unusual capital expenditure requirements arise.
- **Need to defend trade secrets and other intellectual property** – CSBR currently relies on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain its competitive position in the industry. The Company may be required to defend its trade secrets in the US and overseas in the future, and there can be no assurance these defenses will be successful.

**Champions Oncology**  
**Consolidated Statements of Income**  
 (In 000s, except per share data)

FYE April	2015 April	2016 April	2017 April	1Q18 July	2Q18 October	3Q18 January	4Q18 April	2018 April	1Q19 July	2Q19 October	3Q19E January	4Q19E April	2019E April
Revenue													
Personalized oncology solutions	\$1,663	\$1,972	\$1,721										
Translational oncology solutions	<u>7,200</u>	<u>9,210</u>	<u>13,691</u>										
Total revenues	\$8,863	\$11,182	\$15,412	\$5,033	\$5,203	\$5,082	\$4,923	\$20,241	\$6,225	\$6,693	\$6,350	\$6,150	\$25,418
Expenses													
Cost of personalized oncology solutions	2,733	2,102	1,434										
Cost of translational oncology solutions	4,900	6,584	8,269	2,608	2,653	2,473	2,819	10,553	3,083	3,451	3,050	2,890	12,474
Research and development	4,845	4,194	4,293	1,147	1,115	1,045	1,094	4,401	1,088	1,193	1,140	1,110	4,531
Sales and marketing	4,283	3,445	3,260	677	551	627	715	2,570	518	740	700	680	2,638
General and administrative	<u>5,340</u>	<u>5,173</u>	<u>4,962</u>	<u>1,225</u>	<u>954</u>	<u>1,004</u>	<u>888</u>	<u>4,071</u>	<u>1,055</u>	<u>1,034</u>	<u>1,140</u>	<u>1,110</u>	<u>4,339</u>
Total operating costs and expenses	<u>22,101</u>	<u>21,498</u>	<u>22,218</u>	<u>5,657</u>	<u>5,273</u>	<u>5,149</u>	<u>5,516</u>	<u>21,595</u>	<u>5,744</u>	<u>6,418</u>	<u>6,030</u>	<u>5,790</u>	<u>23,982</u>
Income (loss) from operations	(13,238)	(10,316)	(6,806)	(624)	(70)	(67)	(593)	(1,354)	481	275	320	360	1,436
								<u>11,042</u>					
Other income (expense)	225	(38)	(56)	(44)	(13)	(7)	(24)	(88)	1	(7)	(10)	(10)	(26)
Income (loss) before tax	(13,013)	(10,354)	(6,862)	(668)	(83)	(74)	(617)	(1,442)	482	268	310	350	1,410
Income tax expense (benefit)	127	92	21	6	11	2	44	63	0	1	0	0	1
Net income (loss)	(13,140)	(10,446)	(6,883)	(674)	(94)	(76)	(661)	(1,505)	482	267	310	350	1,409
Basic income per share	<u>(\$2.20)</u>	<u>(\$1.20)</u>	<u>(\$0.64)</u>	<u>(\$0.06)</u>	<u>(\$0.01)</u>	<u>(\$0.01)</u>	<u>(\$0.06)</u>	<u>(\$0.14)</u>	<u>\$0.04</u>	<u>\$0.02</u>	<u>\$0.03</u>	<u>\$0.03</u>	<u>\$0.12</u>
Diluted income per share	<u>(\$2.20)</u>	<u>(\$1.20)</u>	<u>(\$0.64)</u>	<u>(\$0.06)</u>	<u>(\$0.01)</u>	<u>(\$0.01)</u>	<u>(\$0.06)</u>	<u>(\$0.14)</u>	<u>\$0.04</u>	<u>\$0.02</u>	<u>\$0.02</u>	<u>\$0.02</u>	<u>\$0.10</u>
Basic shares outstanding	5,985	8,695	10,684	10,982	10,988	10,994	11,000	10,991	11,012	11,278	11,400	11,450	11,285
Diluted shares outstanding	5,985	8,695	10,684	10,982	10,988	10,994	11,000	10,991	12,618	14,037	14,100	14,150	13,726
Key ratios:													
Revenue growth - Personalized oncology		18.6%	-12.7%										
Revenue growth - Transactional Oncology		27.9%	48.7%	37.1%	16.7%	42.6%	32.3%	31.3%	23.7%	28.6%	25.0%	25.0%	25.6%
Gross margin - Personalized oncology	-64.3%	-6.6%	16.7%										
Gross margin - Translational oncology	31.9%	28.5%	39.6%	48.2%	49.0%	51.3%	42.7%	47.9%	50.5%	48.4%	52.0%	53.0%	50.9%
R&D/revenue	54.7%	37.5%	27.9%	22.8%	21.4%	20.6%	22.2%	21.7%	17.5%	17.8%	18.0%	18.0%	17.8%
Sales & marketing/revenue	48.3%	30.8%	21.2%	13.5%	10.6%	12.3%	14.5%	12.7%	8.3%	11.1%	11.0%	11.0%	10.4%
G & A/revenue	60.3%	46.3%	32.2%	24.3%	18.3%	19.8%	18.0%	20.1%	16.9%	15.4%	18.0%	18.0%	17.1%
Tax Rate	-1.0%	-0.9%	-0.3%	-0.9%	-13.3%	-2.7%	7.1%	-4.4%	0.0%	0.4%	0.0%	0.0%	0.1%
Deprec, amort & non-cash comp.	3,376	2,799	2,874	606	267	243	250	1,366	200	240	250	250	940
Cash Flow/share	<u>(\$1.61)</u>	<u>(\$0.87)</u>	<u>(\$0.37)</u>	<u>(\$0.01)</u>	<u>\$0.02</u>	<u>\$0.02</u>	<u>(\$0.03)</u>	<u>(\$0.01)</u>	<u>\$0.05</u>	<u>\$0.04</u>	<u>\$0.04</u>	<u>\$0.04</u>	<u>\$0.17</u>
EBITDA/share	<u>(\$1.63)</u>	<u>(\$0.88)</u>	<u>(\$0.38)</u>	<u>(\$0.01)</u>	<u>\$0.02</u>	<u>\$0.02</u>	<u>(\$0.04)</u>	<u>(\$0.01)</u>	<u>\$0.05</u>	<u>\$0.04</u>	<u>\$0.04</u>	<u>\$0.04</u>	<u>\$0.17</u>

**Balance Sheets**

(\$000s)

Assets:	4/30/18	10/31/18
Cash and equivalents	\$856	\$1,956
Accounts receivable, net	3,917	4,703
Prepaid expenses & other	287	262
Total current	5,060	6,921
Restricted cash	150	0
Property, plant & equip., net	2,083	2,535
Other long-term assets	116	114
Goodwill	669	669
TOTAL ASSETS	\$8,078	\$10,239
Liabilities:		
Accounts payable	\$2,154	\$2,021
Accrued liabilities	569	341
Deferred revenue and other	4,730	4,970
Total current	7,453	7,332
Other non-current liabilities	622	915
Total liabilities	8,075	8,247
Stockholders' equity	3	1,992
TOTAL LIAB & EQ	\$8,078	\$10,239

**Quarterly Earnings Comparisons**

	July	October	January	April	Total
<b>Revenues (in \$Mill)</b>					
2015					8,863
2016					11,182
2017	3,670	4,457	3,565	3,720	15,412
2018	5,033	5,203	5,082	4,923	20,241
2019E	6,225	6,693	6,350	6,150	25,418
<b>Earnings per Share (diluted)</b>					
2015					(\$2.20)
2016					(\$1.20)
2017	(\$0.26)	(\$0.05)	(\$0.13)	(\$0.22)	(\$0.64)
2018	(\$0.06)	(\$0.01)	(\$0.01)	(\$0.06)	(\$0.14)
2019E	\$0.04	\$0.02	\$0.02	\$0.02	\$0.10

Source: Dawson James Securities, Inc. estimates; Company documents

**Important Disclosures:**

**Price Chart:**



Price target and ratings changes over the past 3 years:

Initiated – Buy - May 15, 2018 – Price Target \$10  
Update – Buy - September 21, 2018 Price Target increased to \$16

Dawson James Securities, Inc. (the “Firm”) is a member of the Financial Industry Regulatory Authority (“FINRA”) and the Securities Investor Protection Corporation (“SIPC”).

The Firm does not make a market in the securities of the subject company (s). The Firm has NOT engaged in investment banking relationships with CSBR in the prior twelve months, as a manager or co-manager of a public offering and has NOT received compensation resulting from those relationships. The Firm may seek compensation for investment banking services in the future from the subject company(s). The Firm has received other compensation from the subject company(s) in the last 12 months for services unrelated to the managing or co-managing of a public offering.

Neither the research analyst(s) whose name appears on this report nor any member of his (their) household is an officer, director or advisory board member of these companies. The Firm and/or its directors and employees may own securities of the company(s) in this report and may increase or decrease holdings in the future. As of December 31, 2018, the Firm as a whole did not beneficially own 1% or more of any class of common equity securities of the subject company (s) of this report. The Firm, its officers, directors, analysts or employees may effect transactions in and have long or short positions in the securities (or options or warrants related to those securities) of the company(s) subject to this report. The Firm may effect transactions as principal or agent in those securities.

Analysts receive no direct compensation in connection with the Firm's investment banking business. All Firm employees, including the analyst(s) responsible for preparing this report, may be eligible to receive non-product or service specific monetary bonus compensation that is based upon various factors, including total revenues of the Firm and its affiliates as well as a portion of the proceeds from a broad pool of investment vehicles consisting of components of the compensation generated by investment banking activities, including but not limited to shares of stock and/or warrants, which may or may not include the securities referenced in this report.

Although the statements in this report have been obtained from and are based upon recognized statistical services, issuer reports or communications, or other sources that the Firm believes to be reliable, we cannot guarantee their accuracy. All opinions and estimates included in this report constitute the analyst's judgment as of the date of this report and are subject to change without notice.

**Information about valuation methods and risks can be found in the “STOCK VALUATION” and “RISK FACTORS” sections of this report.**

The securities of the company discussed in this report may be unsuitable for investors depending on their specific investment objectives and financial position. This report is offered for informational purposes only, and does not constitute an offer or solicitation to buy or sell any securities discussed herein in any jurisdiction where such would be prohibited. Additional information is available upon request.

**Ratings Definitions:**

- 1) **Buy:** the analyst believes the price of the stock will appreciate and produce a total return of at least 20% over the next 12-18 months;
- 2) **Neutral:** the analyst believes the price of the stock is fairly valued for the next 12-18 months;
- 3) **Sell:** the analyst believes the price of the stock will decline by at least 20% over the next 12-18 months and should be sold.

The following chart reflects the range of current research report ratings for all companies followed by the analysts of the Firm. The chart also reflects the research report ratings relating to those companies for which the Firm has performed investment banking services in the last twelve months.

Ratings Distribution	Company Coverage		Investment Banking	
	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	47	90%	10	21%
Market Perform (Neutral)	5	10%	0	0%
Market Underperform (Sell)	0	0%	0	0%
<b>Total</b>	<b>52</b>	<b>100%</b>	<b>10</b>	<b>19%</b>

**Analyst Certification:**

The analyst(s) whose name appears on this research report certifies that 1) all of the views expressed in this report accurately reflect his (their) personal views about any and all of the subject securities or issuers discussed; and 2) no part of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst in this research report; and 3) all Dawson James employees, including the analyst(s) responsible for preparing this research report, may be eligible to receive non-product or service specific monetary bonus compensation that is based upon various factors, including total revenues of Dawson James and its affiliates as well as a portion of the proceeds from a broad pool of investment vehicles consisting of components of the compensation generated by investment banking activities, including but not limited to shares of stock and/or warrants, which may or may not include the securities referenced in this report.