

Life Sciences Technology

February 18, 2015

T2 Biosystems, Inc.

(TTOO) - NEUTRAL

Momentum is...meeting 25% of Top Hospitals

|                       |                   |
|-----------------------|-------------------|
| Price:                | \$20.01           |
| Fair Value Estimate:  | \$25.00           |
| 52-Week Range:        | \$11.00 - \$24.50 |
| Market Cap (MM):      | \$400             |
| Shr.O/S-Diluted (mm): | 20.0              |
| Average Daily Volume: | 46,496            |
| Book Value:           | \$2.64            |
| Yield:                | 0.0%              |
| Cash/Share:           | \$(7.61)          |
| FCF Yield:            | (39.1)%           |
| Debt/Cap:             | 18%               |

|            |           |           |           |
|------------|-----------|-----------|-----------|
| FYE: Dec   | 2015E     | 2016E     | 2017E     |
| EPS:       | \$(2.27)E | \$(2.00)E | \$(0.56)E |
| Prior EPS: | \$(2.10)  | \$(1.50)  | NC        |
| Consensus  | -1.95     | -1.91     | -1.52     |
| P/E Ratio: | NA        | NA        | NA        |

Quarterly EPS:

|    |           |    |    |
|----|-----------|----|----|
| Q1 | \$(0.57)E | NA | NA |
| Q2 | \$(0.57)E | NA | NA |
| Q3 | \$(0.57)E | NA | NA |
| Q4 | \$(0.56)E | NA | NA |

Quarterly Revenue (M):

|       |      |       |        |
|-------|------|-------|--------|
| Q1    | \$0E | NA    | NA     |
| Q2    | \$1E | NA    | NA     |
| Q3    | \$1E | NA    | NA     |
| Q4    | \$2E | NA    | NA     |
| Year: | \$4E | \$34E | \$123E |



PORTFOLIO MANAGER BRIEF

T2's transformative diagnostic approach for hospital acquired infections is gaining momentum. The company's platform enables accurate identification within hours relative to days using traditional methods. Despite being in active discussions with 25% of the top-450 US hospitals, management maintained its 2015 placement guidance of 30 T2Dx instruments (60% in 2H15). With FDA approval last September, seven salespeople on staff since November, and positive pricing relative to our model, T2 is on track to exceed our commercialization estimates.

ANALYST NOTES

- Management color suggests potential upside to the guided 30 T2Dx instrument placements in 2015. T2 stated that it is in active discussions with 25% of the top-450 hospitals, and many of these target group hospitals have had strong receptivity. In fact, 9 of these hospitals have already performed internal economic analysis and plan to submit their findings/proposals to hospital administrators soon. We estimate that the discussion-to-conversion cycle will take 6-12 months.
- Sales rep hires continue to exceed our initial model. T2 has had seven salespeople on staff since November 2014. The company intends to hire an additional 3-4 people over the next 60-90 days to further penetrate its target market. We modeled for 8 reps by 2Q15 in our initial waterfall model.
- Lyme disease panel potentially expands T2's addressable market by \$700 million to \$3.7 billion. While still in very early stages and likely a 2017-2018+ revenue story, the unique structure of the collaboration agreement with US Canon Life Sciences basically absolves T2 of any upfront risk and enables the company to benefit heavily from potential commercialization. We discuss the Lyme disease opportunity in more detail in a previous [note](#).
- T2 reported a respective 4Q14 and full-year burn of \$9.1 million and \$31.4 million. T2 closed 2014 with \$73.8 million of cash, which should support the company through mid-to-late 2016.
- Our valuation approach places a revenue multiple on T2 to determine the fair market value. We detail our fair value estimate of \$25 per share in a previous [note](#).

## T2 Biosystems (TTOO)

Annual Income Statement

Paul Knight

Janney Capital Markets

212.888.2696

(\$ in millions, except per share data)

| FY-ending Dec 31,             | 2012      | 2013      | 2014E     |           |           |           |           | 2015E     |           |   |           |           | 2016E     | 2017E     | 2018E    |
|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---|-----------|-----------|-----------|-----------|----------|
|                               | 2012      | 2013      | 1Q14      | 2Q14      | 3Q14      | 4Q14      | 2014E     | 1Q15E     | 2Q15E     | 3Q15E   | 4Q15E     | 2015E     | 2016E     | 2017E     | 2018E    |
| <b>Diagnostics</b>            | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.3  | \$ 1.1    | \$ 1.4    | \$ 29.9   | \$ 116.1  | \$ 231.0 |
| Candida                       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.3   | 1.1       | 1.4       | 29.9      | 116.1     | 231.0    |
| Bacteria                      | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0   | 0.0       | 0.0       | 0.0       | 0.0       | 0.0      |
| HemoStat                      | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0   | 0.0       | 0.0       | 0.0       | 0.0       | 0.0      |
| <b>Instruments</b>            | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.1       | 0.1   | 0.3       | 0.5       | 3.1       | 6.0       | 8.1      |
| T2Dx                          | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.1       | 0.1   | 0.3       | 0.5       | 3.1       | 6.0       | 8.1      |
| T2Stat                        | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0   | 0.0       | 0.0       | 0.0       | 0.0       | 0.0      |
| Other                         | 0.0       | 0.3       | 0.0       | 0.0       | 0.0       | 0.1       | 0.1       | 0.2       | 0.5       | 0.5   | 0.6       | 1.7       | 0.9       | 0.4       | 0.4      |
| <b>Total Revenues</b>         | \$ 0.0    | \$ 0.3    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.1    | \$ 0.1    | \$ 0.2    | \$ 0.5    | \$ 0.9  | \$ 1.9    | \$ 3.5    | \$ 33.9   | \$ 122.6  | \$ 239.5 |
| Consensus Estimate 02-17-15   |           |           |           |           |           | \$ 0.0    | \$ 0.2    | \$ 0.1    | \$ 0.2    | \$ 1.0  | \$ 1.0    | \$ 3.0    | \$ 31.6   | \$ 111.0  | \$ 0.0   |
| <b>Diagnostics COGS</b>       | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.2  | \$ 0.8    | \$ 1.0    | \$ 12.0   | \$ 40.7   | \$ 57.8  |
| <b>Instruments COGS</b>       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.1   | 0.2       | 0.4       | 1.7       | 3.0       | 3.6      |
| T2Dx                          | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.1   | 0.2       | 0.4       | 1.7       | 3.0       | 3.6      |
| T2Stat                        | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0   | 0.0       | 0.0       | 0.0       | 0.0       | 0.0      |
| Total cost of sales           | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.3   | 1.0       | 1.4       | 13.6      | 43.7      | 61.4     |
| <b>Gross Profit</b>           | \$ 0.0    | \$ 0.3    | \$ 0.0    | \$ 0.0    | \$ 0.0    | \$ 0.1    | \$ 0.1    | \$ 0.2    | \$ 0.5    | \$ 0.5  | \$ 0.9    | \$ 2.1    | \$ 20.2   | \$ 78.9   | \$ 178.1 |
| <b>Gross Profit Margin</b>    | 100.0%    | 100.0%    | #DIV/0!   | #DIV/0!   | #DIV/0!   | 100%      | 100.0%    | 100%      | 90.7%     | 62.8%   | 45.8%     | 59.7%     | 59.7%     | 64.4%     | 74.4%    |
| Diagnostics GM                |           |           |           |           |           |           |           |           |           | 25.0%   | 25.0%     | 25.0%     | 60.0%     | 65.0%     | 75.0%    |
| Instrument GM                 |           |           |           |           |           |           |           |           |           | 25.0%   | 20.0%     | 20.6%     | 45.0%     | 50.0%     | 55.0%    |
|                               |           |           |           |           |           |           |           |           |           | ***Ramping manufacturing utilization (16-17: Full)*** |           |           |           |           |          |
| R & D Expenses                | 11.7      | 14.9      | 5.1       | 4.7       | 4.8       | 5.2       | 19.8      | 5.8       | 5.9       | 5.9   | 5.8       | 23.4      | 28.0      | 35.0      | 45.0     |
| S G & A Expenses              | 2.9       | 5.0       | 1.8       | 2.4       | 3.0       | 3.7       | 11.0      | 5.0       | 5.1       | 5.2   | 5.6       | 20.9      | 30.0      | 51.0      | 82.2     |
| Non-Cash Expenses (Amort/SBC) | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.9       | 0.9       | 0.9   | 0.9       | 3.4       | 4.0       | 5.0       | 6.0      |
| <b>Operating Income</b>       | \$ (14.7) | \$ (19.7) | \$ (6.9)  | \$ (7.1)  | \$ (7.8)  | \$ (8.8)  | \$ (30.7) | \$ (11.5) | \$ (11.4) | \$ (11.4)   | \$ (11.3) | \$ (45.6) | \$ (41.8) | \$ (12.1) | \$ 44.9  |
| <b>Operating Margin</b>       | -77121%   | -7403%    | #DIV/0!   | #DIV/0!   | #DIV/0!   | -7427%    | -25782%   | -5725%    | -2215%    | -1304%  | -592%     | -1301%    | -123.4%   | -9.9%     | 18.7%    |
| Interest Income               | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0   | 0.0       | 0.0       | 0.0       | 0.0       | 0.0      |
| Interest Expense              | (0.2)     | (0.4)     | (0.1)     | (0.1)     | (0.3)     | (0.3)     | (0.7)     | 0.0       | 0.0       | 0.0   | 0.0       | 0.0       | 0.0       | 0.0       | 0.0      |
| Other Income (expense)        | 0.4       | (0.5)     | 0.1       | (0.1)     | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0   | 0.0       | 0.0       | 0.0       | 0.0       | 0.0      |
| <b>Pretax Income</b>          | \$ (14.5) | \$ (20.6) | \$ (6.9)  | \$ (7.3)  | \$ (8.1)  | \$ (9.1)  | \$ (31.4) | \$ (11.5) | \$ (11.4) | \$ (11.4)   | \$ (11.3) | \$ (45.6) | \$ (41.8) | \$ (12.1) | \$ 44.9  |
| Income Taxes / (Benefit)      | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0   | 0.0       | 0.0       | 0.0       | 0.0       | 15.7     |
| Tax Rate                      | 0.0%      | 0.0%      | 0.0%      | 0.0%      | 0.0%      | 0.0%      | 0.0%      | 0.0%      | 0.0%      | 0.0%  | 0.0%      | 0.0%      | 0.0%      | 0.0%      | 35.0%    |
| <b>Net Income Operating</b>   | \$ (14.5) | \$ (20.6) | \$ (6.9)  | \$ (7.3)  | \$ (8.1)  | \$ (9.1)  | \$ (31.4) | \$ (11.5) | \$ (11.4) | \$ (11.4)   | \$ (11.3) | \$ (45.6) | \$ (41.8) | \$ (12.1) | \$ 29.2  |
| Extraordinaries (After Tax)   | (4.4)     | (6.9)     | (1.9)     | (1.9)     | (0.8)     | 0.0       | (4.6)     | 0.0       | 0.0       | 0.0   | 0.0       | 0.0       | 0.0       | 0.0       | 0.0      |
| <b>Net Income GAAP</b>        | \$ (18.9) | \$ (27.5) | \$ (8.8)  | \$ (9.2)  | \$ (8.9)  | \$ (9.1)  | \$ (36.0) | \$ (11.5) | \$ (11.4) | \$ (11.4)   | \$ (11.3) | \$ (45.6) | \$ (41.8) | \$ (12.1) | \$ 29.2  |
| <b>Diluted Operating EPS</b>  | \$ (6.24) | \$ (8.69) | \$ (4.90) | \$ (5.03) | \$ (0.65) | \$ (0.45) | \$ (3.62) | \$ (0.57) | \$ (0.57) | \$ (0.57)   | \$ (0.56) | \$ (2.27) | \$ (2.00) | \$ (0.56) | \$ 1.30  |
| Diluted GAAP EPS              | (8.15)    | (11.60)   | (6.25)    | (6.35)    | (0.71)    | (0.45)    | (4.15)    | (0.57)    | (0.57)    | (0.57)  | (0.56)    | (2.27)    | (2.00)    | (0.56)    | 1.30     |
| Consensus Estimate 02-17-15   |           |           |           |           |           | \$ (0.43) | \$ (3.33) | \$ (0.45) | \$ (0.46) | \$ (0.47)   | \$ (0.60) | \$ (1.91) | \$ (1.49) | \$ (0.56) | \$ 1.30  |
| Diluted Shares Outstanding    | 2.3       | 2.4       | 1.4       | 1.5       | 12.4      | 20.0      | 8.7       | 20.0      | 20.1      | 20.1  | 20.1      | 20.1      | 20.9      | 21.8      | 22.4     |

Source: Company reports, Janney Capital Markets estimates, Capital IQ

02/17/15

| CANDIDA DGx Test         |         | Test utilization |         |         |         | 1Q      | 2Q      | 3Q       | 4Q       | 5Q       | 6Q       |                      |          |          |          |          |
|--------------------------|---------|------------------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------------------|----------|----------|----------|----------|
|                          |         |                  |         |         |         | 0%      | 20%     | 40%      | 60%      | 80%      | 100%     | **Co - 0/33/66/100** |          |          |          |          |
| Hospital Adoption (Tier) |         |                  |         |         |         |         |         |          |          |          |          |                      |          |          |          |          |
| Top                      | 1Q15    | 2Q15             | 3Q15    | 4Q15    | 1Q16    | 2Q16    | 3Q16    | 4Q16     | 1Q17     | 2Q17     | 3Q17     | 4Q17                 | 1Q18     | 2Q18     | 3Q18     | 4Q18     |
| 100                      | 0       | 4                | 7       | 8       | 11      | 15      | 19      | 23       | 25       | 29       | 33       | 36                   | 37.6     | 38.5     | 39.0     | 39.8     |
| %                        | 0%      | 100%             | 50%     | 30%     | 24%     | 20%     | 18%     | 15%      | 13%      | 12%      | 11%      | 10%                  | 9%       | 8%       | 7%       | 6%       |
| 200                      | 0       | 0                | 7       | 8       | 13      | 19      | 26      | 33       | 39       | 44       | 48       | 52                   | 58.5     | 55.4     | 56.1     | 56.5     |
| %                        | 0%      | 0%               | 50%     | 30%     | 27%     | 26%     | 24%     | 22%      | 20%      | 18%      | 16%      | 15%                  | 14%      | 12%      | 10%      | 9%       |
| 300                      | 0       | 0                | 0       | 8       | 12      | 19      | 27      | 36       | 43       | 49       | 54       | 61                   | 62.7     | 65.0     | 66.0     | 66.5     |
| %                        | 0%      | 0%               | 0%      | 30%     | 27%     | 26%     | 25%     | 24%      | 22%      | 20%      | 18%      | 17%                  | 15%      | 14%      | 12%      | 11%      |
| 450                      | 0       | 0                | 0       | 1       | 7       | 15      | 25      | 39       | 51       | 61       | 74       | 82                   | 87.7     | 91.5     | 93.5     | 95.7     |
| %                        | 0%      | 0%               | 0%      | 5%      | 15%     | 20%     | 23%     | 26%      | 26%      | 25%      | 25%      | 23%                  | 21%      | 19%      | 17%      | 15%      |
| >450                     | 0       | 0                | 0       | 1       | 3       | 6       | 11      | 20       | 37       | 61       | 89       | 126                  | 171      | 231      | 295      | 363      |
|                          | 0%      | 0%               | 0%      | 5%      | 7%      | 8%      | 11%     | 13%      | 19%      | 25%      | 30%      | 36%                  | 41%      | 48%      | 54%      | 58%      |
| Total Accts              | 0       | 4                | 13      | 27      | 47      | 73      | 109     | 151      | 194      | 243      | 297      | 356                  | 418      | 482      | 550      | 621      |
|                          | 1       | 2                | 3       | 4       | 5       | 6       | 7       | 8        | 9        | 10       | 11       | 12                   | 13       | 14       | 15       | 16       |
|                          | 1Q15    | 2Q15             | 3Q15    | 4Q15    | 1Q16    | 2Q16    | 3Q16    | 4Q16     | 1Q17     | 2Q17     | 3Q17     | 4Q17                 | 1Q18     | 2Q18     | 3Q18     | 4Q18     |
| Top 100                  | 0       | 0                | 1600    | 4200    | 7440    | 11904   | 17724   | 23737    | 30182    | 37043    | 44231    | 51490                | 58127    | 64121    | 69436    | 73397    |
| Top 200                  | 0       | 0                | 0       | 1950    | 4380    | 8147    | 13821   | 21651    | 29651    | 38876    | 48218    | 56811                | 64478    | 72074    | 77039    | 80753    |
| Top 300                  | 0       | 0                | 0       | 0       | 2430    | 5705    | 7868    | 13305    | 20541    | 27468    | 34714    | 41632                | 48307    | 53603    | 58063    | 61547    |
| Top 450                  | 0       | 0                | 0       | 0       | 270     | 1249    | 3431    | 7183     | 13062    | 20436    | 28493    | 37457                | 45996    | 53276    | 59430    | 64345    |
| > 450                    | 0       | 0                | 0       | 0       | 203     | 363     | 799     | 1656     | 3126     | 5792     | 10082    | 16334                | 24963    | 36339    | 50914    | 68503    |
| Total Tests              | -       | -                | 1,600   | 6,150   | 14,723  | 27,367  | 43,643  | 67,531   | 96,561   | 129,614  | 165,736  | 203,723              | 241,870  | 279,412  | 314,882  | 348,546  |
| Test Cost                |         |                  |         |         |         |         |         |          |          |          |          |                      |          |          |          |          |
| \$200                    | \$0.000 | \$0.000          | \$0.112 | \$0.431 | \$2.356 | \$4.379 | \$6.983 | \$10.805 | \$15.450 | \$20.738 | \$26.518 | \$32.596             | \$38.699 | \$44.706 | \$50.381 | \$55.767 |
| \$175                    | \$0.000 | \$0.000          | \$0.168 | \$0.646 | \$0.515 | \$0.958 | \$1.528 | \$2.364  | \$3.380  | \$4.536  | \$5.801  | \$7.130              | \$8.465  | \$9.779  | \$11.021 | \$12.199 |
| DGx Revs                 | \$0.000 | \$0.000          | \$0.280 | \$1.076 | \$2.9   | \$5.3   | \$8.5   | \$13.2   | \$18.8   | \$25.3   | \$32.3   | \$39.7               | \$47.2   | \$54.5   | \$61.4   | \$68.0   |

## IMPORTANT DISCLOSURES

### Research Analyst Certification

I, Paul Knight, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

### Janney Montgomery Scott LLC ("Janney") Equity Research Disclosure Legend

T2 Biosystems, Inc. currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Janney Montgomery Scott LLC managed or co-managed a public offering of securities for T2 Biosystems, Inc. in the past 12 months.

Janney Montgomery Scott LLC received compensation for investment banking services from T2 Biosystems, Inc. in the past 12 months.

Janney Montgomery Scott LLC intends to seek or expects to receive compensation for investment banking services from T2 Biosystems, Inc. in the next three months.

The research analyst is compensated based on, in part, Janney Montgomery Scott's profitability, which includes its investment banking revenues.

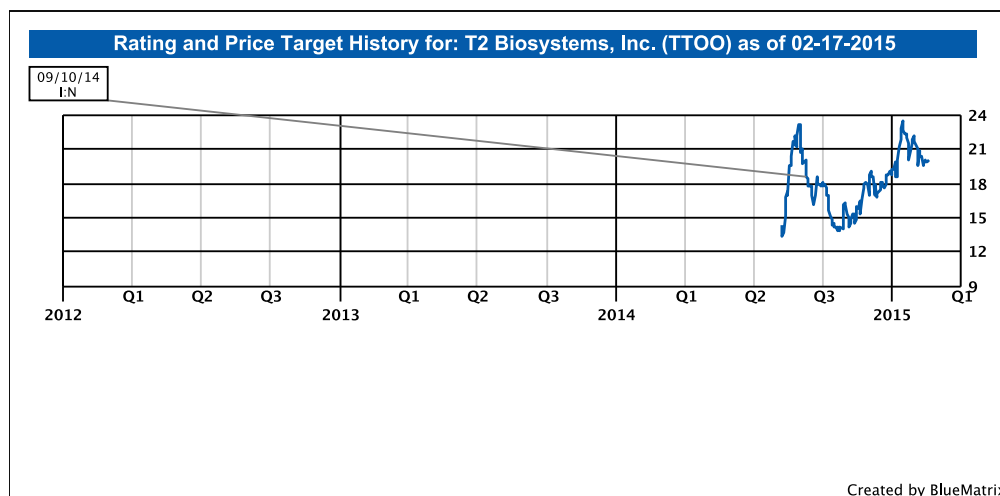
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**BUY:** Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

**NEUTRAL:** Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

**SELL:** Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

### Price Charts



### Janney Montgomery Scott Ratings Distribution as of 12/31/14

| Rating             | Count | Percent | IB Serv./Past 12 Mos. |         |
|--------------------|-------|---------|-----------------------|---------|
|                    |       |         | Count                 | Percent |
| <b>BUY [B]</b>     | 138   | 51.30   | 15                    | 10.87   |
| <b>NEUTRAL [N]</b> | 131   | 48.70   | 5                     | 3.82    |
| <b>SELL [S]</b>    | 0     | 0.00    | 0                     | 0.00    |

\*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

## Other Disclosures

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