

Breakthrough Sepsis Pathogen Detection

Corporate Presentation
April 2019
(NASDAQ: TTOO)

Forward-Looking Statements

This presentation contains forward-looking statements. Such statements reflect the current views of senior management of T2 Biosystems, Inc. ("we", "us", "our", "T2", "T2 Biosystems" or the "Company") and include those about T2's goals, strategies, plans, objectives, prospects, milestones, future operations, business and industry, anticipated product benefits, future events and conditions and potential scenarios. Such statements and those that include the words "expect," "intend," "plan," "believe," "project," "forecast," "estimate," "may," "should," "anticipate" and similar statements of a future or forward-looking nature identify forward-looking statements for purposes of the federal securities laws or otherwise. Forward-looking statements address matters that involve risks and uncertainties. Each forward-looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement, including, for example: (i) our status as an early commercial-stage company and expectation to incur losses in the future; (ii) our ability to obtain marketing authorization from the FDA or regulatory clearance for additional product candidates in the United States or abroad; (iii) the market acceptance of our technology; (iv) our ability to timely and successfully develop and commercialize existing and future product candidates; (v) our lengthy and variable sales cycle and lack of sales history; (vi) our ability to successfully manage growth; (vii) federal, state and foreign regulatory requirements; (viii) our uncertain future capital needs and ability to raise future capital; (ix) dependence on third parties; (x) recruiting, training and retaining key personnel; (xi) competitive factors; (xii) manufacturing and other product risks; (xii) risks related to intellectual property; and (xiii) other risk factors included in our annual report on form 10-K filed with the Securities and Exchange Commission (SEC) on March 19, 2018 and other documents we file with the SEC from time to time. Accordingly, there are or will be important factors that could cause our actual results to differ materially from those indicated in these statements. The statements made herein speak only as of the date of this presentation. We do not undertake, and specifically disclaim, any obligation to update any forward-looking statements contained in this presentation.

Why Are We Here Today?

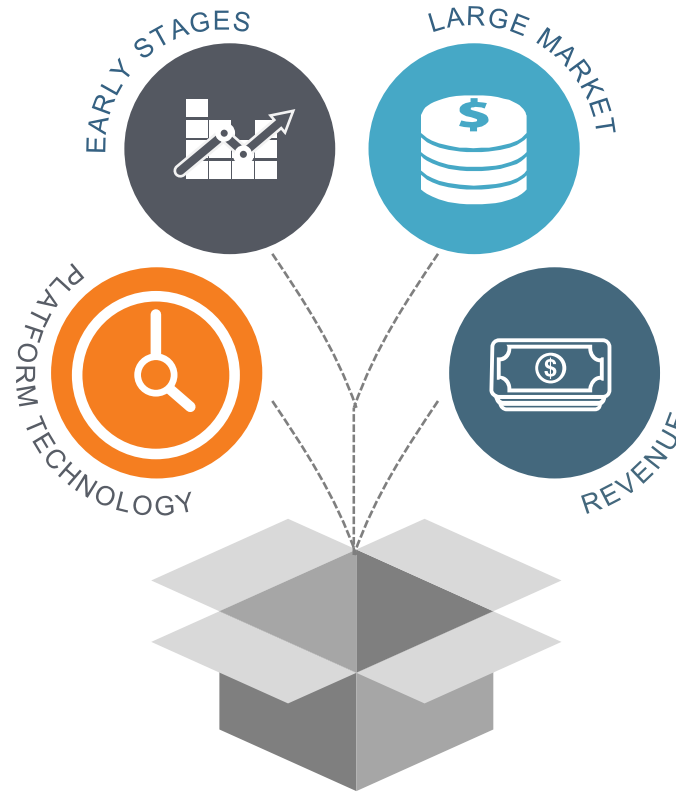
T2 has reached a tipping point for broad adoption of the T2Dx[®] technologies

Early Stages

- Proven with T2Candida[®]
- Launching with T2Bacteria[®]

Platform Technology

- Market expansion over time



Large Market

- Global unmet need

Revenue

- “Double-double” revenue growth opportunity with attractive recurring model

Sepsis is a Deadly and Frustrating Global Problem

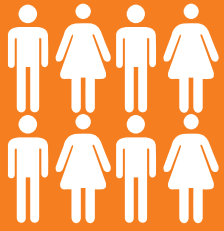
A recognized, but unsolved global crisis



1 death every
5 seconds
(more or less)

Sepsis is a Deadly and Frustrating Global Problem

A critical part of the solution is now available



Potentially
>40,000
preventable deaths in
the U.S. with T2



The Facts About Sepsis

Most expensive hospital-treated condition in the U.S.



Contributes to
1 in 2-3 hospital
deaths¹



Representing
\$27B in U.S.
healthcare
costs^{2,3}



**Claims more
lives than breast
cancer, prostate
cancer and
AIDS, combined⁴**



1 in 5 surviving
sepsis patients
die within 2 years
due to sepsis⁵



Kills ~250,000
Americans
annually and ~6
million people
worldwide^{6,7}



Most prevalent
and costly cause
of hospital
readmissions⁸

1. Liu, V., Escobar, G. J., Greene, J. D., et al. (2014). Hospital deaths in patients with sepsis from 2 independent cohorts. *Jama*, 312(1), 90-92.

2. Torio, C. M. and Moore, B. J. (2016). Statistical Brief# 204. Healthcare Cost and Utilization Project (HCUP). May.

3. McDermott, K. W., Elixhauser, A., Sun, R. (2017). Statistical Brief# 225. Healthcare Cost and Utilization Project (HCUP). June.

4. National Institute of General Medical Sciences. National Institutes of Health. Sepsis fact sheet. 2014.

5. Prescott, H. C., Osterholzer, J. J., Langa, K.M., et al. (2016). Late mortality after sepsis: propensity matched cohort study.

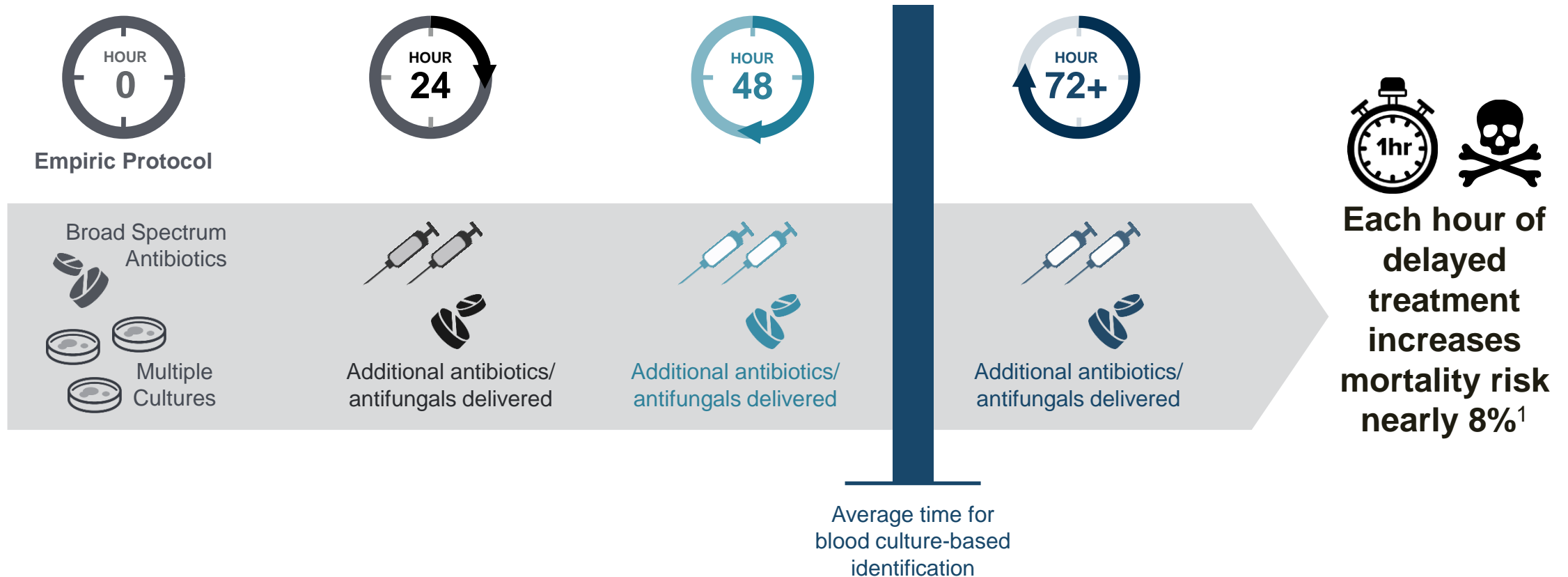
6. Centers for Disease Control and Prevention.

7. Gilbert, J. A. (2018). Sepsis care bundles: a work in progress. *The Lancet Respiratory Medicine*.

8. Mayr, F. B., Talisa, V. B., Balakumar, V., et al. (2017). Proportion and cost of unplanned 30-day readmissions after sepsis compared with other medical conditions. *JAMA*, 317(5), 530-531.

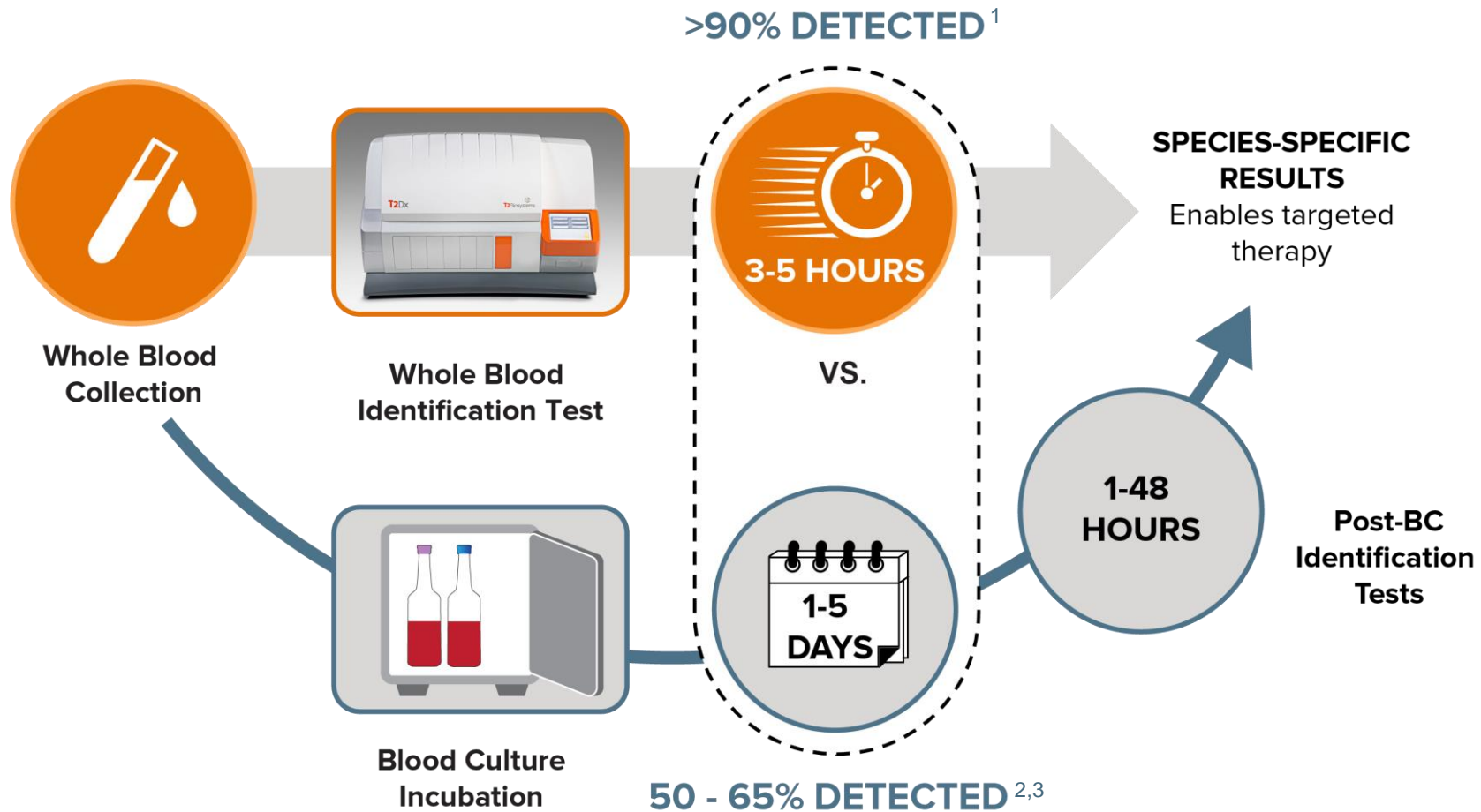
Sepsis Poses an Hourly Challenge that Relies on Probability-Based Protocols

Patient journey: Current pathway and empiric “process”



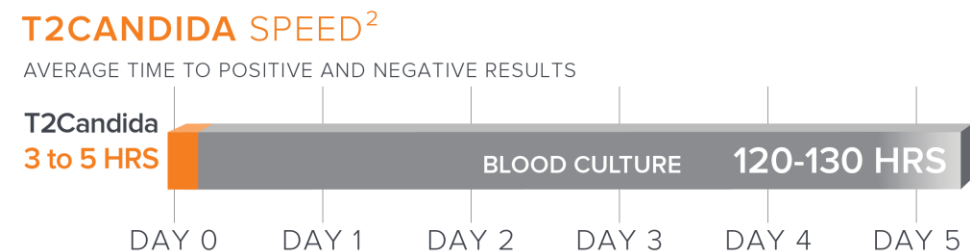
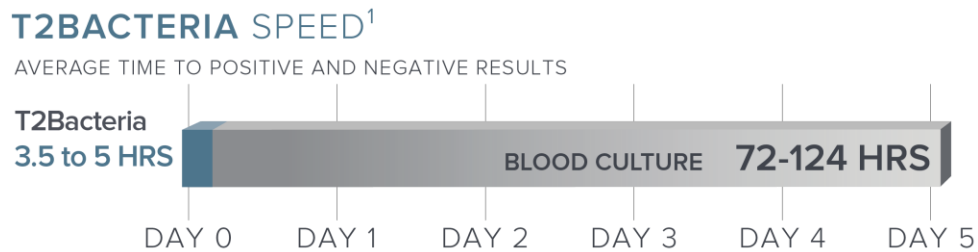
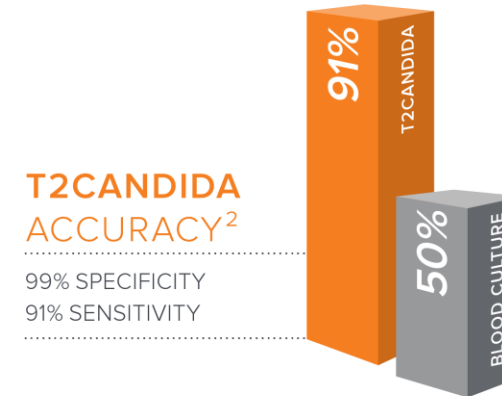
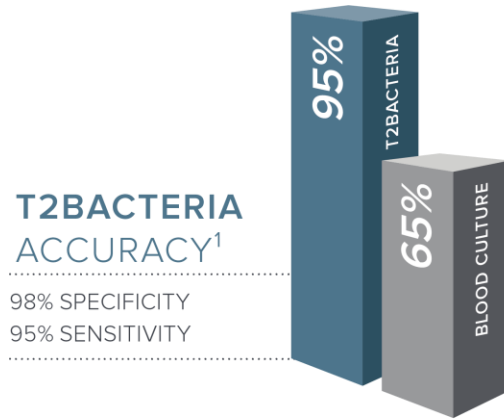
T2MR: New Standard in Detecting Sepsis Pathogens

T2Dx diagnostics provides faster and more accurate detection



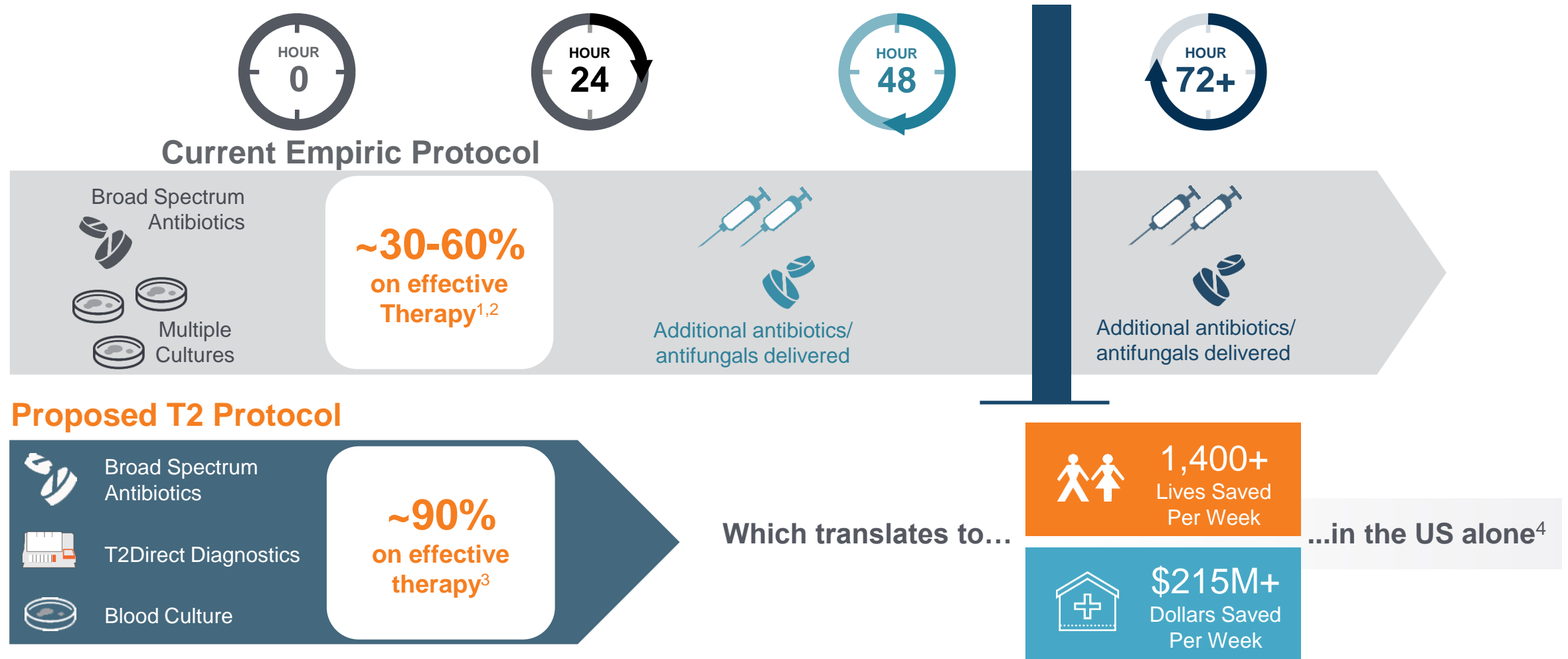
1. Mylonakis, E., Clancy, C. J., Ostrosky-Zeichner, L., et al. (2015). T2 magnetic resonance assay for the rapid diagnosis of candidemia in whole blood: a clinical trial. *Clinical Infectious Diseases*, ciu959.
2. Clancy, C. J., & Nguyen, M. H. (2013). Finding the "missing 50%" of invasive candidiasis: how nonculture diagnostics will improve understanding of disease spectrum and transform patient care. *Clinical infectious diseases*, 56(9), 1284-1292.
3. Cockerill III, F. R., Wilson, J. W., Vetter, E.A., et al. (2004). Optimal testing parameters for blood cultures. *Clinical Infectious Diseases*, 38(12), 1724-1730.

The Blood Culture Divide



1. T2Bacteria Pivotal Clinical Study. Overall average sensitivity of 90% in prospective arm and 97% PPA in contrived arm.
2. Mylonakis, E., Clancy, C. J., Ostrosky-Zeichner, L., et. al. (2015). T2 magnetic resonance assay for the rapid diagnosis of candidemia in whole blood: a clinical trial. Clinical infectious diseases, ciu959.

A Simple Change, an Immense Impact



1. T2Bacteria Clinical Pivotal Trial Data.

2. Buehler, S. S., Madison, B., Snyder, S. R., et al. (2016). Effectiveness of practices to increase timeliness of providing targeted therapy for inpatients with bloodstream infections: a laboratory medicine best practices systematic review and meta-analysis. Clinical microbiology reviews, 29(1), 59-103.

3. Kumar, A., Ellis, P., Arabi, Y., et al. (2009). Initiation of inappropriate antimicrobial therapy results in a fivefold reduction of survival in human septic shock. CHEST Journal, 136(5), 1237-1248.

4. Represents the potential healthcare savings and lives saved using the T2Direct Diagnostic to test high risk patients based on assumed levels of total annual patients assuming all high-risk sepsis patients are tested with T2Direct Diagnostics and assuming (i) 90% of high risk patients receive appropriate therapy within hours of the presentation of symptoms, (ii) a 50% mortality rate reduction for patients who receive rapid appropriate therapy, and (iii) that each new detected patient saves \$22,800. This slide contains T2's estimates, which are not based on historical results and constitute forward-looking statements that are subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statement.

T2Candida Panel is Changing Treatment Protocols

Growing number of real-world T2Candida success stories



- Study demonstrated \$2.3M in annual hospital savings
- Reduced median ICU length of stay by 7 days; overall stay by 4 days
- Most negative patients had antifungals discontinued or de-escalated saving \$\$.¹



- Median length of stay reduced by 7 days
- Unnecessary antifungal therapy was avoided in >50% of patients
- Average net antifungal savings of ~\$195 for every patient tested²



- Pharmacy savings of ~\$280 per patient
- T2Candida detected 56% more positive patients than blood culture³



- 100% of patients who tested positive received appropriate therapy in <9 hours
- Therapy was discontinued for all patients who tested negative⁴

1. Wilson, N.M., Kenney, R.M., Tibbetts, R.J., et. al. T2 Magnetic Resonance Improves the Timely Management of Candidemia. Poster Presentation IDWeek 2016.

2. Estrada, S. J. Real World Value of T2Candida Lee Memorial Hospital. Slide Presentation ASM 2016.

3. Kateon, H., Edwards, J., Sawyer, A., et al. Utilization of T2Candida Panel for the rapid detection of *Candida* species in a large community hospital. Poster Presentation IDWeek 2016.

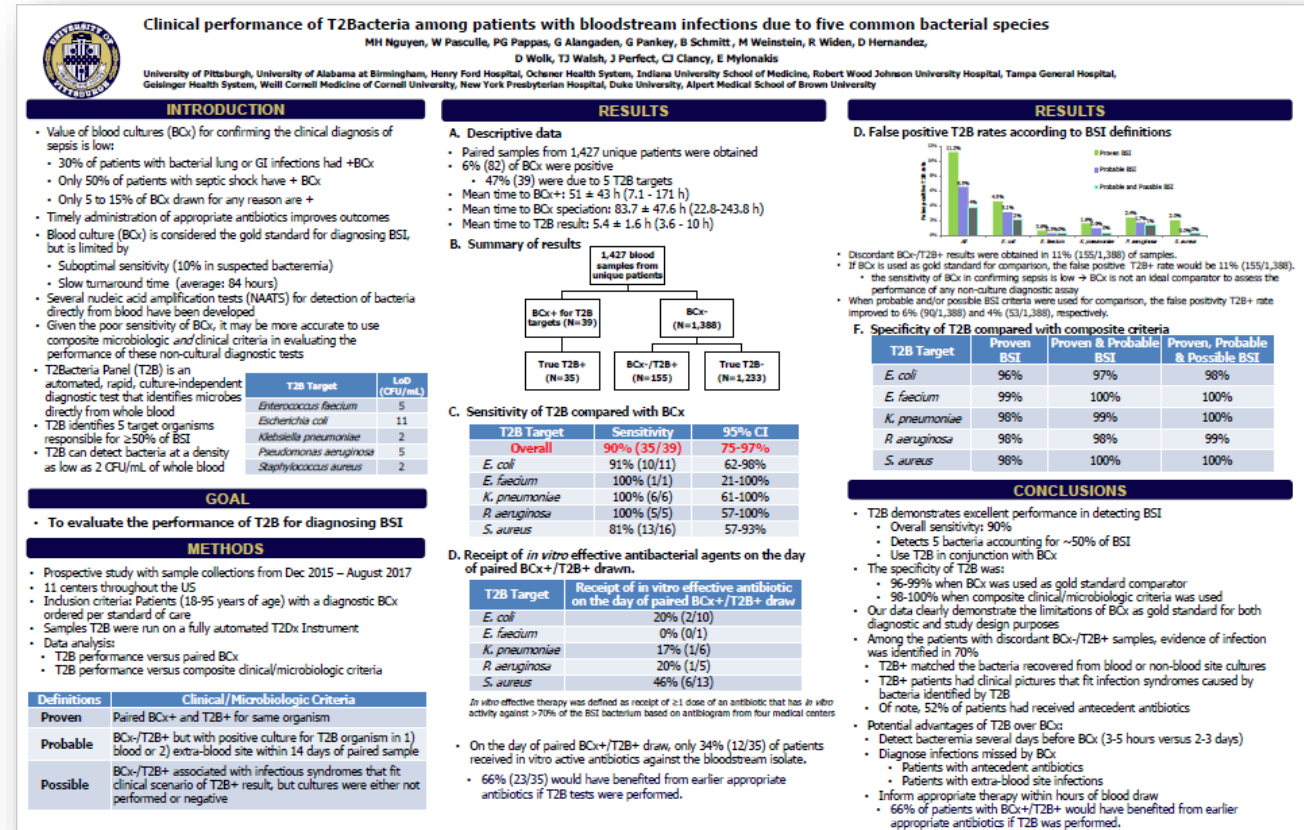
4. Patel, F. and Young, E. Antifungal Prescribing During Initial Implementation of Candidemia Early Detection and Species Identification Testing with T2Candida Panel. Poster Presentation IDWeek 2016.

T2Bacteria Pivotal Data Presented at ASM Microbe 2018

1,400 patient samples collected across 11 hospitals

Comparisons to Blood Culture:

- Detected **69 patient** infections not detected by culture
- Provided results more than **2.5 days faster than culture** (5.4 hours)
- 68%** of patients with a BSI confirmed by T2 and blood culture could have benefitted from earlier rapid diagnostic result
- Noted advantage in detecting infected patients on antibiotics who were missed by blood culture



Significant Burden of Bacterial Infection and Sepsis

Payors should support and incentivize revised protocols

**Add
T2Bacteria
&
T2Candida**

**>90% of
patients on the
right targeted
therapy within
6 to 8 hours**



Representing \$27B in U.S. healthcare costs^{1,2}

~\$25,000 Cost Savings

Per patient if on right therapy
within 24 hours³

Billions of Dollars

In savings for hospitals, including
decreased readmissions⁴

50% Reduction

In mortality for patients with rapid
effective treatment⁵

Patients Benefit

From reduction in long-term
side-effects

1. Torio, C. M. and Moore, B. J. (2016). Statistical Brief# 204. Healthcare Cost and Utilization Project (HCUP). May.

2. McDermott, K. W., Elixhauser, and A., and Sun, R. (2017). Statistical Brief# 225. Healthcare Cost and Utilization Project (HCUP). June.

3. Estimated economic impact based on customer experience with T2Candida Panel; Bilir, S. P., Ferrufino, C. P., Pfaller, M. A., and Munakata, J. (2015); and studies for target bacterial species.

4. See slide 11.

5. Leibovici, L., Shraga, I., Drucker, M., et al.(1998). The benefit of appropriate empirical antibiotic treatment in patients with bloodstream infection. Journal of internal medicine, 244(5), 379-386.

Established Reimbursement Across Multiple Care Environments

Financially attractive in all settings

Point-of-Care Testing

Emergency Room
Outpatient Settings

- CPT 87640, 87798
- Coverage if not admitted; other outpatient settings
- ER is most common setting

| | T2Bacteria |
|---------------|------------|
| Reimbursement | \$220 |
| Cost of Test | \$150 |

In-Patient Hospital

Admitted from ER
Admitted for Unrelated Procedure

- DRG 870, 871, 872
- Coverage if admitted or already admitted
- Example DRG Reimbursement: \$35,000¹

| | T2Bacteria | T2Candida |
|----------------|------------|-----------|
| Cost of Test | \$150 | \$200 |
| Percent of DRG | 0.4% | 0.6% |

1% of DRG

The T2Dx Impact

Improve the quality of patient care while reducing healthcare costs

Targeted Rx

- Reduced resistance
- Reduced length of stay
- Potential reduction in morbidity and mortality



Efficient use of limited resources

- Reduced repeat testing
- Reduced unnecessary Rx
- Reduced time waiting for diagnostic test results

Adoption Drives Revenue and Rapid Pay Back

Doing well by doing good

Typical High Risk Patients In Target Market

| | |
|---|-------|
| Patients Suspected of Sepsis | 3,000 |
| Patients Suspected of Fungal Infections | 375 |

Potential Hospital Utilization Scenario

| | Patients Tested | Price per Test | Total Revenue |
|-------------------------|-----------------|----------------------|------------------|
| T2Bacteria | 1,500 | \$150 | \$225,000 |
| T2Candida | 375 | \$200 | \$75,000 |
| Annual Recurring | 1,875 | | \$300,000 |
| T2Dx Instrument | | \$100,000 unit price | |

In this example, patients suspected of sepsis are screened with the T2Bacteria Panel in the ER and throughout portions of the hospital as part of a sepsis protocol.

Commercial Strategy

Global expansion of T2Direct Diagnostics driven by T2Bacteria Panel launch



United States

Direct Sales

- **Organization:** 16 sales reps and 6 medical affairs liaisons
- **Target:** 1,200 hospitals with the highest concentration of patients at risk for sepsis-related infections

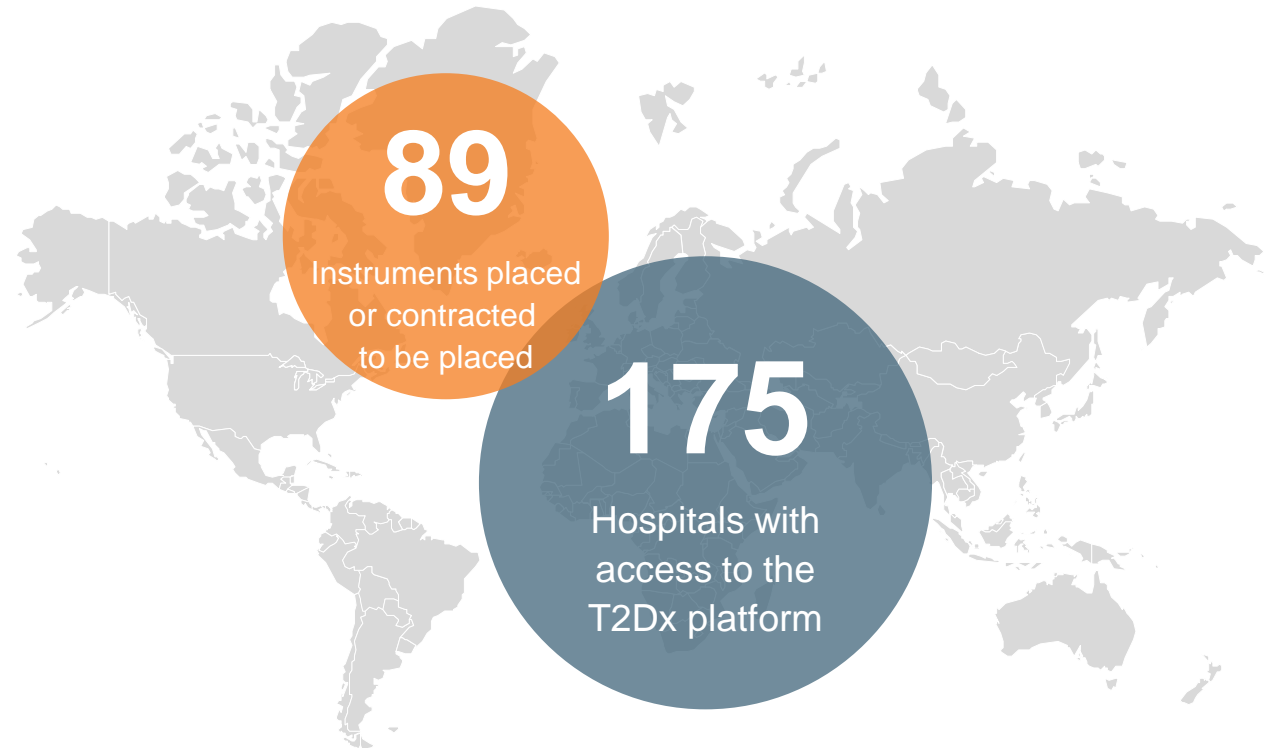


International

Distributor Sales in 19 Countries

- 8 distribution partners supported by small team of direct sales/marketing and field service personnel

Expanding on the existing T2Dx installed base



Global expansion of T2Direct Diagnostics driven by T2Bacteria Panel launch

29th ECCMID Amsterdam, Netherlands
13 – 16 April 2019

Commercial Activity Related to T2Bacteria Launch

Encouraging data points from first 6 months driving refined strategy

- Positive customer feedback on **team of 6 medical affairs liaisons** supporting new system activation
- Delivered **100 new proposals** from Q4 2017 to Q4 2018, a significant increase from prior periods
- Every new U.S. account in 2H 2018 closed with **30-90 day sales cycle** vs. typical cycle of 6-12 months
- In Q1 2019, secured **first meetings with 250+ hospitals** not previously engaged but that expressed interest in T2Direct Diagnostics
- Sales team **balanced between** engaging with additional accounts that could fall into 30-90 day sales cycle category, while also advancing existing traditional opportunities (6-12 month cycle)



Opportunity to double
U.S. installed base
from new proposals
delivered from Q4 2017
to Q4 2018 alone

Breakthroughs in Medical Diagnostics

First and only FDA-cleared diagnostic to detect pathogens directly from blood

FAST COMPANY



Early 20th
century



Blood
Culture

1947



Cell
Counting

1959



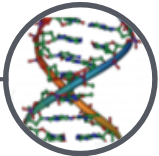
Immunoassay

1968



Automated
Chemistry
Analyzers

1985




PCR
Technique

Direct Sample Analysis Identify Pathogens Using Magnetic Resonance



Product Pipeline Highlights – Enabled by Highly-Sensitive Detection

Directly from whole blood – no requirement for blood culture

| | | 2016 | 2017 & 2018 | 2019 & beyond | |
|--------|----------------------|--|--|---|---|
| SEPSIS | FUNGAL | T2Candida Panel CE Marked & FDA cleared | T2Candida auris Panel Research Use Only including environmental testing | | |
| | BACTERIAL | | T2Bacteria Panel CE Marked & FDA cleared | T2Resistance Gram-positive and gram-negative resistance genes | CARB-X Additional bacterial species and resistance markers, including ESBL and gram-positive |
| | BACTERIAL RESISTANCE | | |  Powered by CARB-X <i>FDA Breakthrough Device designation</i> | Powered by CARB-X |
| | TICK-BORNE | | | T2Lyme Panel Canon | |

Financial Summary¹

| December 31, 2018 | | |
|-------------------------------------|------|------------|
| Revenue | FY18 | \$10.5M |
| | FY17 | \$4.7M |
| | FY16 | \$4.1M |
| Product Revenue | FY18 | \$4.8M |
| | FY17 | \$3.4M |
| | FY16 | \$1.7M |
| Product Growth | YoY | 41% |
| Cash Burn | 4Q18 | \$9.4M |
| Cash ⁴ | | \$50.8M |
| Common Shares Outstanding | 4Q18 | 44.2M |
| Quarterly Cash Burn (2018 vs. 2017) | | -15.3% YoY |

| >5% Investors – As of December 31, 2018 ^{2,3} | |
|--|-------|
| Canon Life Sciences | 13.7% |
| Goldman Sachs | 9.5% |
| Senvest Management | 6.4% |

1. All amounts are rounded to the nearest hundred thousand.
2. Based on 44,175,441 shares outstanding as of December 31, 2018.
3. Source SEC filings as of February 15, 2019.
4. Includes \$180k restricted cash.

Guidance

| 2019 Guidance | |
|---|--|
| Total revenue | Double from \$10.5 million in 2018 |
| Product revenue | 100%+ growth |
| Research revenue | 40%+ growth |
| 1Q 2019 revenue: | \$1.3 - \$1.5 million |
| T2Dx new contracts: | 70 – 80 |
| 1Q 2019 T2Dx new contracts: | 8 – 10 |
| Quarterly operating expense:¹ | \$10.5 - \$11.5 million² |

| Long-Term Targets | |
|-------------------------|--|
| Total revenue | Doubling in 2019 and 2020 to at least \$50 million in 2020 |
| Breakeven model: | |
| Total revenue | \$65 - \$75 million |
| Gross margin | ~45 - 50% |

1. Excluding cost of product revenue.

2. Including non-cash depreciation and stock based compensation expenses from stock options and RSUs of approximately \$3.0 million

3. * This slide contains T2's future goals and aspirations, which constitute forward-looking statements that are subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements. See "Forward-Looking Statements" on slide 2.

Investment Highlights

A platform technology with multiple, billion-dollar franchise opportunities



T2MR

Innovative
technology - broad
applications



Market

\$2B+ Initial market
potential



Sepsis Pathogen ID

Provide species-specific
results, direct from whole
blood, in 3 to 5 hours



Reimbursement

Covered by existing
reimbursement codes



Robust Pipeline

A new generation of
diagnostics



Execution

Patient access growing,
key collaborations
established