

### Acquisition of Razor Genomics September 2019



### **Forward Looking Statements**

Any statements that are not historical fact (including, but not limited to statements that contain words such as "will," "believes," "plans," "anticipates," "expects," "estimates" and similar expressions) are forward-looking statements. These statements include those pertaining to the time to complete and the results of OncoCyte's ongoing CLIA Validation study of DetermaVu<sup>™</sup>, the closing of our planned acquisition of Razor and the Razor Test, implementation and results of research, development, clinical trials and studies, commercialization plans, future financial and/or operating results, and future opportunities for OncoCyte, along with other statements about the future expectations, beliefs, goals, plans, or prospects expressed by management. Forward-looking statements involve risks and uncertainties, including, without limitation, risks inherent in the development and/or commercialization of potential diagnostic tests or products, uncertainty in the results of clinical trials or regulatory approvals, the capacity of our third-party supplied blood sample analytic system to provide consistent and precise analytic results on a commercial scale, the need and ability to obtain future capital, maintenance of intellectual property rights, and the need to obtain third party reimbursement for patients' use of any diagnostic tests we commercialize. Actual results may differ materially from the results anticipated in these forward-looking statements and accordingly such statements should be evaluated together with the many uncertainties that affect the business of OncoCyte, particularly those mentioned in the "Risk Factors" and other cautionary statements found in OncoCyte's Securities and Exchange Commission filings, which are available from the SEC's website. You are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date on which they were made. OncoCyte undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made, except as required by law.



We are building a global oncology content company with a portfolio of high value molecular tests, that help physicians and patients make informed care decisions to improve outcomes, reduce overall cost of care and drive significant returns for our shareholders.



### **Potential Growth Vectors**





### **Opportunity Selection Criteria**

- High degree of scientific confidence
- Serve critical decision points in clinical oncology (focus on lung)
- Reimbursed content, or developing content with market predicate
- Area of high unmet clinical need
- High margin
- LDT US, potential to "kit" for ROW



### Razor Acquisition Expands Cancer Diagnostic Continuum



Diagnostic	OncoCyte DetermaVu	Razor Test
Stage of Care	Post LDCT/pre biopsy	Post surgical treatment/pre-chemotherapy
Clinical Utility (potential)	Eliminate unnecessary biopsies and resulting comorbidities	Better health outcomes from better predictor of patients that will benefit from adjuvant chemotherapy
Value Proposition	Significantly reduce overall costs of screening and prevent avoidable hospitalizations and deaths	Precision medicine for chemotherapy targeting chemo to appropriate early stage patients, increasing survival, saving 15k – 30k lives annually in U.S.; avoiding unnecessary chemo costs and side effects
US TAM (\$)	\$2B – \$4.7B	\$150M Stage I and II (US Market only)



Combined DetermaVu and Razor Answer Critical Questions and Establish Oncocyte as the Leader in Early Stage Lung Content



Average cost of biopsy and complications ~\$15,000 Source: T. Lokhadwala presentation 2014 Multidisciplinary Symposium in Thoracic Oncology October 2014

Synergy of combined offering and common call points increases brand awareness, sales force efficiency and potential for success



### **Founder Biographies**



David M. Jablons, MD Founder

Professor David Jablons, MD is an internationally recognized leader in the fields of Surgical Thoracic Oncology and in Thoracic Oncology Research. He is the founder and Chief of the Thoracic Oncology Program at UCSF, as well as the Chief of the Thoracic Surgery Section of UCSF's Department of Surgery. The pioneering work of his NIH-funded Thoracic Oncology Laboratory, with one of the largest thoracic tumor tissue banks in the world, was among the first to document and publish the critical significance of stem cell biology in the genesis and virulence of a wide variety of cancers. This revolutionary research has led to numerous drug and diagnostics patents issued by the US and international patent offices, and to the development of both a new class of potential anticancer drugs and the first validated system for molecular personalization of early stage lung cancer care.



Michael Mann, MD Founder

Professor Michael Mann. M.D. is an internationally respected thoracic surgeon and a seasoned entrepreneur. He is also a leader in the development of innovative genetic and molecular therapies and diagnostics for thoracic and cardiovascular disease. Dr. Mann joined the Thoracic Oncology Program at the University of California, San Francisco in 2003, and was also appointed as an Associate Investigator in the well-known UCSF Cardiovascular Research Institute. He had received an A.B. (summa cum laude) in synthetic chemistry from Princeton University and an M.D. from Stanford University, and was awarded a National Research Service Award Fellowship through the National Institutes of Health (NIH). Dr. Mann completed his General Surgery residency at Harvard Medical School/Brigham and Women's Hospital, where he also served on the Faculty of Cardiovascular Medicine, and subsequently completed his fellowship in Cardiothoracic Surgery at UCSF.



### Razor Test Dramatically Reduces Mortality Rate for Early Stage Patients

- The ≈40,000 patients diagnosed annually in the US with "curable early stage" lung cancer face 30-50% mortality.
- In independent, blinded, international trials of over 1500 patients,
- Razor Test consistently *outperformed current NCCN criteria* in identifying patients likely to recur and therefore benefit from chemotherapy.
- High-risk patients identified with the Razor Test that went on to standard, inexpensive platinum doublet post-operative therapy had the *survival rate increased from 49% to 92%* compared to no chemo high-risk population.





### Published Research

Landmark publications in 2012 with subsequent data published in 2018 supporting clinical utility positions Razor Genomics as a First Mover

#### A practical molecular assay to predict survival in resected non-squamous, non-small-cell lung cancer: development and international validation studies

Johannes R Kratz\*, Jianxing He\*, Stephen K Van Den Eeden, Zhi-Hua Zhu, Wen Gao, Patrick T Pham, Michael S Mulvihill, Fatemeh Ziaei, Huanrong Zhang, Bo Su, Xiuyi Zhi, Charles P Quesenberry, Laurel A Habel, Qiuhua Deng, Zongfei Wang, Jiangfen Zhou, Huiling Li, Mei-Chun Huang, Che-Chung Yeh, Mark R Segal, M Roshni Ray, Kirk D Jones, Dan J Raz, Zhidong Xu, Thierry M Jahan, David Berryman, Biao He, Michael I Mann. David M Jablons

#### Large-scale validation studies: ~1,500 patients

China Clinical Trials Consortium: 967 patients (Stages I-IIIa)

Kaiser Northern California: 420 patients (Stage I)





Lancet 2012;379:823

Adjuvant Chemotherapy Guided by Molecular Profiling and Improved Outcomes in Early Stage, Non-Śmall-Cell Lung Cancer

Gavitt A. Woodard,<sup>1</sup> Sue X. Wang,<sup>1</sup> Johannes R. Kratz,<sup>1</sup> Clara T. Zoon-Besselink,<sup>1</sup> Chun-Yuan Chiang,<sup>2</sup> Matthew A. Gubens,<sup>3</sup> Thierry M. Jahan,<sup>3</sup> Collin M. Blakely,<sup>3</sup> Kirk D. Jones,4 Michael J. Mann,1 David M. Jablons1





patient cohort 24 Month mean follow up

Clinical Lung Cancer 2018;19:58



## Razor Test Significantly Reduces Mortality for Stage I Patients



- Few Stage I patients are administered chemotherapy
- Over a quarter could benefit from chemotherapy
- Razor assay produces 43% decrease in mortality for high risk patients, savings thousands of lives per year
- Ready for commercial launch

Allows cytotoxic chemotherapy to become a targeted therapy

Source: Clinical Lung Cancer 2018;19:58



### First Mover Advantage in a Significant Market Opportunity

#### Market Overview

- ≈40,000 Stage I or II non-squamous NSCLC resections in the US annually
- Increasing Stage I population with advent of CT screening
- Current standard of care for all Stage IA and many IB/IIA is observation...no test on market today
- Many Stage IB and II patients forgo postoperative chemotherapy due to lackluster clinical data in patients who have not been stratified for risk
- Unprecedented opportunity for pharma to pursue large and growing market in stage IA-IIB for adjuvant IO and targeted agents...currently in discussion with several pharma companies

#### **Reimbursement Process**

- Received proposed positive LCD in August!
- Similar Prognostic Gene Expression panels are reimbursed between \$3,500 - \$4,000 today many with much smaller number of patients in their initial validation study for reimbursement
- CMS approval alone provides coverage for ~70%\* of the US NSCLC market
- Many private payers likely to follow example in support of precision medicine



### Establishing Strong Barriers to Entry

Initiating Key Clinical Marketing Study

- Razor Genomics' planned prospective randomized clinical trial to dramatically accelerate adoption
- Study will define a new guideline-driven Standard of Care for US and International Guidelines
- First randomized study to document improvement in survival using tumor biology
- Once in guidelines, significant barrier to entry for other tests and trials

#### Test is Patent Protected

- Patents already issued in all major markets in US, Europe & Asia
- Test also protected by trade secrets that render the test extremely difficult to replicate



# Standard Workflow Allows for Rapid Global Launch on Widely Adopted Platform



Test designed and validated on ThermoFisher QuantStudio with an estimated install base of >3,000 enabling a potential global launch on established workflows.



### **Razor Genomics Acquisition Summary**

- Razor Risk Stratification Test significantly reduces mortality!
- The test has been validated and published in peer review journals
- Recommendations to change staging protocol published in Jul'18
- Recent CMS Positive Coverage Decision indicative of the need for the test
- Acquisition allows OCX to transition to a commercial phase company in Q1 2020
- Compliments DetermaVu decision point
- Same endpoint that Genomic Health utilized in for their Oncotype Breast Test which resulted in a \$2.8B exit
- Deal structure minimizes capital outlay and aligns Razor Genomics team via participation in revenue growth
- Prospective, randomized market utility trial to start immediately...will deliver data for acceptance in global guidelines
- ~ 50% of targeted patients in 11 states allowing for targeted commercial approach generating solid potential revenue growth with efficient use of commercial investment

