

#### Lance V. Berberian

Chief Information Officer



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## **LabCorp**

#### Where I Have Been

**Electronic Data Systems** 

Quest Diagnostics (CIO)

Interim Healthcare (CIO)

**IDEXX** Laboratories (CIO)

LabCorp (CIO)



### <u>What I Do</u>

Traditional IT:

- Systems
- Infrastructure
- Information Security

#### <u>Other</u>:

- Product Development
- Robotics
- Bioinformatics



#### Who We Are



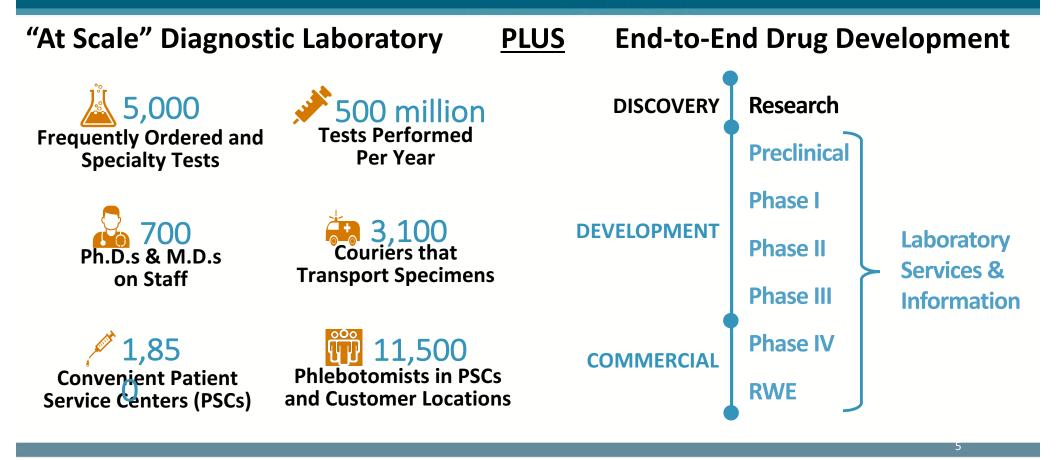
LabCorp is a leading global life sciences company that is deeply integrated in guiding patient care

Our Mission is to Improve Health and Improve Lives

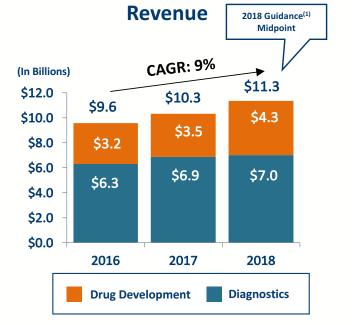
Our Strategic Objectives are to:

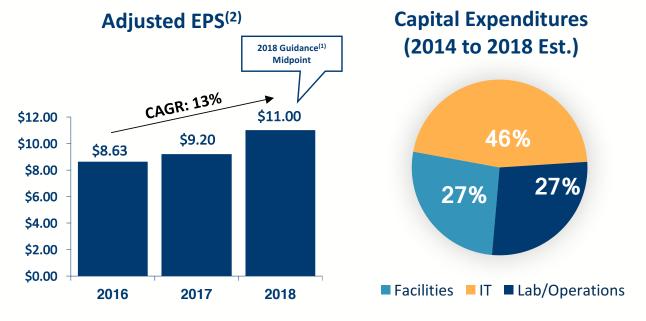
- **1. Deliver World-Class Diagnostics**
- 2. Bring Innovative Medicines to Patients Faster
- 3. Use Technology to Improve the Delivery of Care

#### We Bring this Strategy to Life by Combining the Strengths of Two Leading Healthcare Companies



#### **Financial Performance Under ASC 606**





- 1. Based on guidance issued on November 30, 2018.
- 2. EPS, as presented, represents an adjusted, non-GAAP financial measure (excludes amortization, restructuring and other special charges). See Appendix for non-GAAP reconciliation.
- 3. Free cash flow represents operating cash flow less capital expenditures in each of the years presented. See Appendix for non-GAAP reconciliation.
- 4. Free cash flow in 2017 and 2016 has been reduced by \$8.7 million and \$13.4 million, respectively, as the result of implementation of ASU 2016-18. This amount represents the amount of historical payments made on the Company's zero-coupon subordinated notes deemed to be accreted interest.
- 5. Free cash flow increased by \$47.4 million and \$34.6 million in 2017 and 2016, respectively, for the reclassification of tax payments for net share settlements relating to employee stock vesting from operating activities to financing activities.
- 6. Free cash flow includes a fourth quarter tax payment of approximately \$125 million related to the disposition of the Food Solutions business.

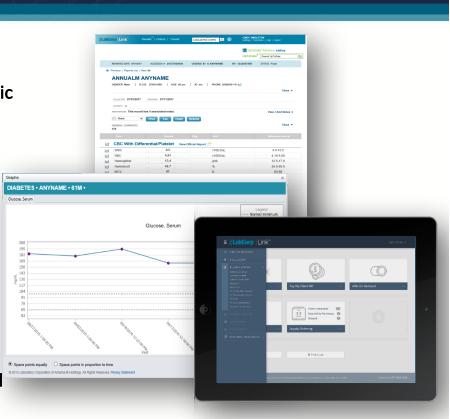


### Utilizing Technological Innovation to Improve Care, Lower Cost and Enhance Consumer Experiences

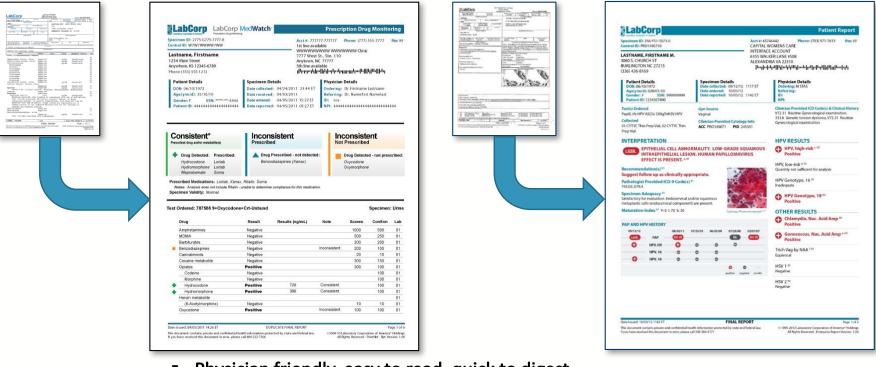


### Link Physician Portal for Convenient Access to LabCorp Information and Services

- LabCorp | Link<sup>™</sup> Order and Results:
  - Enhanced level of ordering and results reporting including historic results trending
  - ✓ Integrated with many client EMRs for demographics
  - ✓ View saved, standing and pending orders
  - ✓ Automate routine tasks including Medicare ABNs
  - ✓ Integrated AccuDraw
- LabCorp | Link<sup>™</sup> eServices:
  - ✓ Suite of mobile optimized value added capabilities for ordering providers to use with Link or their own EMR
  - Provides on-line supply ordering, invoice management and payment, billing information, ABN determination, Accudraw, and test change notifications

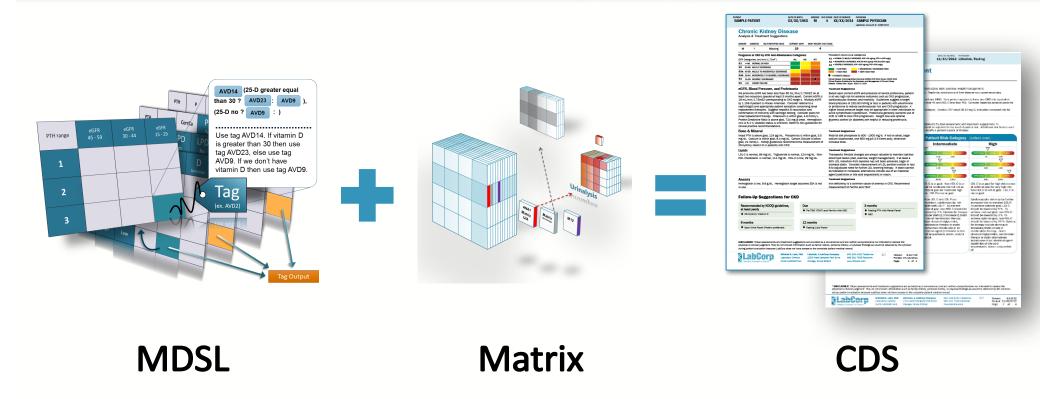


### Report Modernization – Improving the Physician and Patient Experience



- Physician friendly, easy to read, quick to digest.
- Improves patient communication and education.

### MDSL and the Matrix Optimize our Clinical Decision Support (CDS) Systems



### EDI Connectivity in Support of Health Systems, Hospitals and Physician Offices

- Support for >700 EHR and LIS System Interfaces
- 8,000 10,000 Unique EDI Connections Implemented Annually
- >200 Personnel in Technical and Project Management Roles
- Provide Technical Support for > 67,000 active interfaces
- > 7 Million Electronic Order per Month (40%)
- Leverage Platforms for:





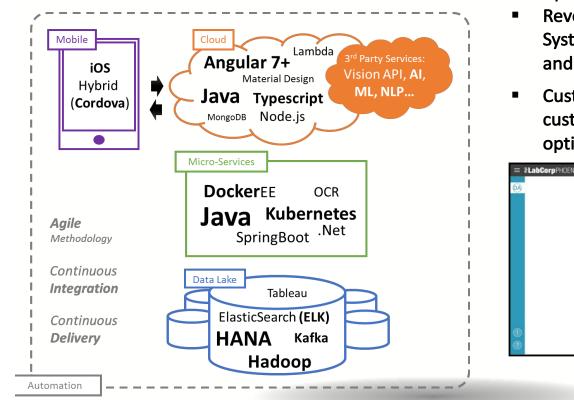
#### **Developing Integrated "Research Hub" Model for Hospitals and Health Systems**

### **LabCorp**

Grow reference testing Access to new revenue stream Cultivate long-term, Differentiate from competitors Hospitals, Health comprehensive Enhance academic reputation Systems & Large Provider Networks partnerships Reduce costs under value-based Improve patient recruiting reimbursement framework for pharmaceutical LabCorp companies Diagnostics Integrated "Research Hub" Model **Patients** Expand patient Greater access to clinical trials recruitment **Pharmaceutical** Improve patient care and Companies Enhance site identification outcomes

#### The Phoenix Project is Modernizing our Unique Business Processes and Systems

### **LabCorp**



**Phoenix Tech Stack** 

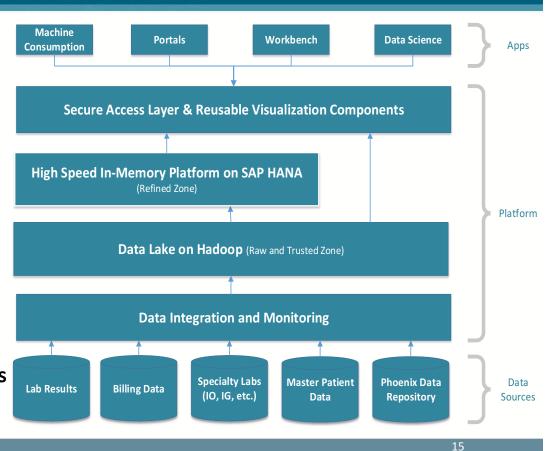
#### **Examples:**

- Revenue Cycle Management (a.k.a. Healthcare Billing)
   System to improve our cash flow, DSO, bad debt expense and efficiency.
- Customer Support for health system and physician customers by enhancing our self-service capabilities and optimizing our call center services.

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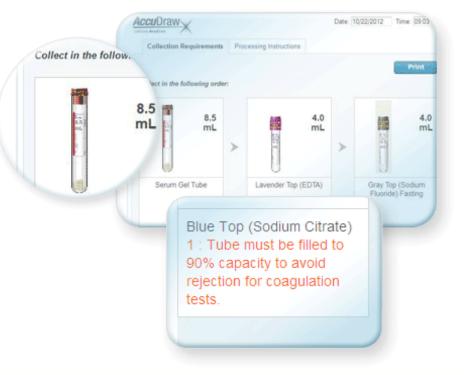
# High-Performance Healthcare Big Data Platform with a Variety of Customer Focused Tools

- "Data Lake" to Accumulate Disparate Data
- "ELTTT" and Information Curation
- Master Data Management
- Patient Matching
- Memory / Disk Optimization Engine
- Flexible Information Access Tools:
  - ✓ Structured Reporting
  - ✓ Business Analytics
  - ✓ Data Feeds to other systems
  - Power tools for Data Scientists & Statisticians (SAS, R, etc.)



#### AccuDraw Phlebotomist Guidance System Ensures Accuracy and Precision

- Combines on-screen visual cues with specimen collection instructions based on the specific combination of tests ordered to help ensure accuracy and precision when collecting specimens
- Following the collection, handling, and shipping guidance may help to reduce the need for patient redraws and repeat visits
- Integrated into LabCorp systems used by our In Office Phlebotomists and Clients as well as in our Patient Service Centers
- Available on the Internet for use by our customers (https://accudraw.labcorp.com)

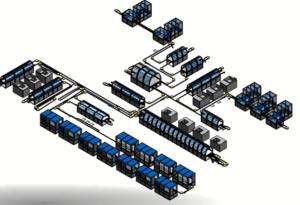


#### LabCorp Designs and Builds Proprietary Advanced Robotics

### **LabCorp**

- Propel serum aliquoting robot
- Software and hardware designed and built by LabCorp
- Processes 80,000 orders (250,000 test tubes) in an eight hour shift
- Currently implemented at our laboratories in:
  - ✓ Burlington, NC (x2)
  - ✓ Tampa, FL
  - ✓ Birmingham, AL
  - ✓ Dublin, OH
  - ✓ Houston, TX
- Enhances efficiency, quality and customer service.





#### **Technical Statistics**

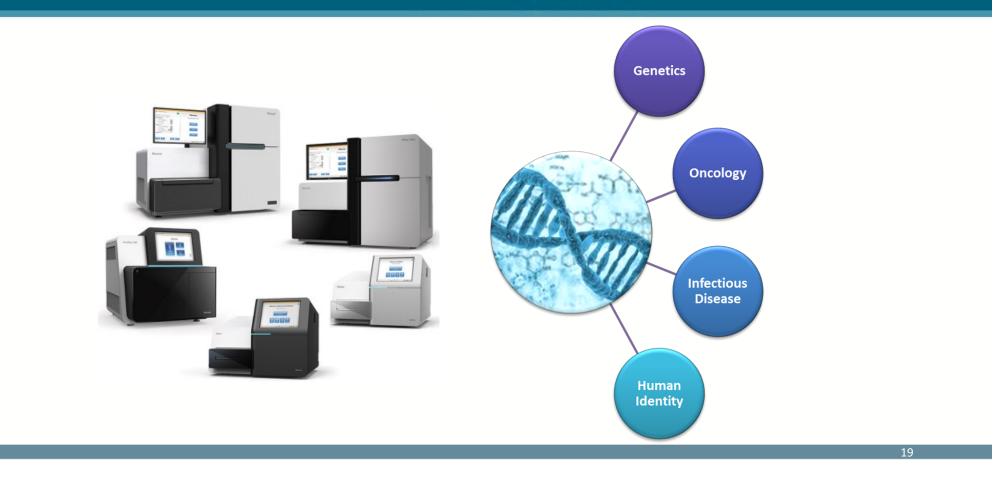
- ✓ 7,000 square feet
- ✓ 133,000 pounds
- ✓ 50,000 piece parts
- ✓ 4000 actuators
- ✓ 49 robots
- ✓ 17 machine vision systems
- $\checkmark$  2 miles of network cable
- $\checkmark$  1 million lines of code

### LabCorp Designs and Builds Proprietary Advanced Robotics





### **Bioinformatics Team is Accelerating the Introduction of New DNA Tests to the Market**



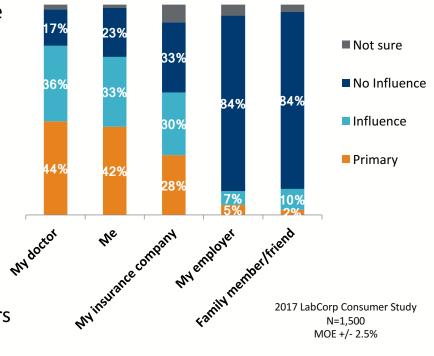
### Why Focus on Patients as Consumers?

### **LabCorp**

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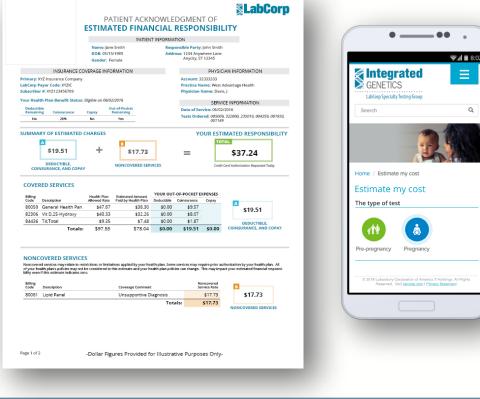
- Consumers are taking greater responsibility for their wellness and healthcare
- Higher co-pays and deductibles drive consumers to influence healthcare decisions
- Advances in technology drive expectation of convenience
- Empowered consumers expect convenience, insights, engagement, and price transparency
- LabCorp is uniquely positioned to engage with health care consumers at scale:
  - ✓ Performs testing for >2.5 million consumers per week
  - ✓ Sees >150,000 consumers per weekday in person
  - $\checkmark$  Has diagnosis and test result information
  - Has data and clinical expertise to engage with consumers in a personalized manner

## Who is involved in the decision on where to get your lab testing?



#### **Patient Out-of-Pocket Cost Estimates**

- The estimator service is enabled across the LabCorp PSC network and for LabCorp in-office phlebotomists
- Estimates are customized for each individual and health plan
- For select genetic testing, consumers can obtain cost estimates online without visiting a PSC



### **Patient Friendly Test Reports**

- Educate patients about what their lab results mean
- Empower patients to participate in their own care
- Condition-specific care plans

ATIENT Patient Name	XX/XX/19XX	DATE OF SERVICE PHYSICIAN XX/XX/2016	
Your Test Results		WITHIN GO	AL BORDERUNE OUT OF GOAL
Test	Your Results	Comme	nts
Blood Sugar			
A1C measures your average blood su control over the last 2-3 months.	Ber <b>()</b> 9.3%	your last test. High bi your heart, blood ves 9.3% Make sure you alway	and has gotten worse since ood sugar levels can damage sels, kidneys, feet and eyes. stake the medications ctor and follow his/her
Blood Lipids			
LDL CHOLESTEROL is the bad cholesterol that can clog your arteries.	<b>50</b> Ref. Range: 0 to 9	9 mg/dL HEART AND BLOOI take any medications Your doctor may reco cholesterol levels to r disease. Weight loss, minutes 5 times a weight	educe your risk of heart
Kidney Health			
eGFR estimates how well your kidney: are filtering blood. The higher the number, the better your kidneys are working.	s <b>93</b> Ref Renge: >59 mL/min/1.73mE2	FUNCTION. Control pressure can belo to	WS NORMAL KIDNEY of diabetes and blood preserve kidney function.
URINE ALBUMIN : CREATININE RATIO is a test that looks for albumin the urine, a sign of kidney damage. Higher amounta also put you at risk fo heart disease and loss of kidney funct The lower the result, the better.	Ref. Range: 0 to 3	conditions like high b or mg/g creat may change or increa treat these conditions medicines prescribed	MIN IS HIGH. Controlling load pressure and diabetes r urine albumin. Your doctor se your medicines to help s. Renember to take all by your doctor. Regular and quitting smoking can urine albumin.
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	I S. Laks, PhD Litholiek, A LabCorp Co ory Director 2250 West Campbell Pa 400897314 Chicago, Illinois 60612	mpany 800 338 4333 Telephone 866 361 7939 Facalmile www.itholink.com	Version: 7.2.3.9 Printed: 09/01/2016 Page: 1 of 1

### LabCorp at Walgreens

### **LabCorp**



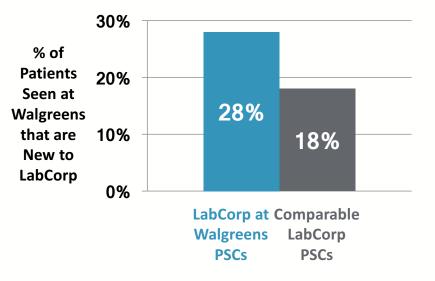


LabCorp

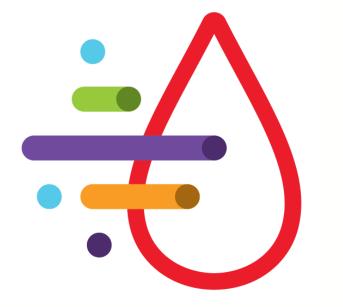
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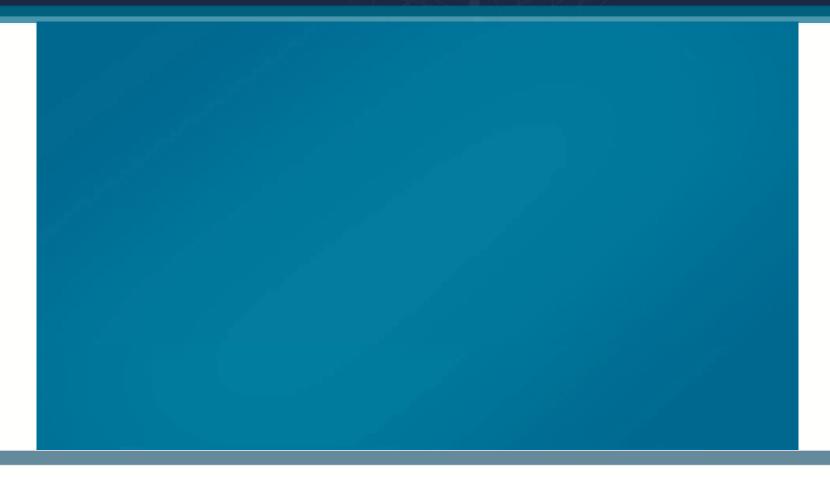


### **Moving Reliable Self-Collected Testing to the Home**





### **Enhancing the Consumer Experience**







#### Leveraging Technological Innovation and LabCorp-Covance Combined Strength

### **LabCorp**

Improved Trials by using Real World Evidence Comprehensive Companion Diagnostics (CDx) Solutions Portfolio of Innovative Solutions Focused on Client Needs

### Leveraging LabCorp-Covance Combined Strength

Holistic Approach to Protocol, Site/Investigator, and Patient Intelligence



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### **Ulcerative Colitis Example**



### Understanding the Impact of Study Design on the Protocol and Available Patient Pool

### **LabCorp**

75%	51,814 patients between June 2016 and May 2017 identified	
reduction	n 48,708 patients between 18 and 80 years old	
	20,288 without Crohn's Disease, IBD and UC Proctitis	
	20,146 without Malignancy, Inherited Immuno Syndrome, TB and HIV/AIDS	
	20,075 without Hepatitis B and C	
	13,950 with all relevant labs populated	
	13,750 with Neutrophil value >= 1.5x10^9/L and Platelet >=100x10^9/L	
	13,552 with Hemoglobin >= 8.5g/dL and Lymphocyte >500 cells/uL	
	13,516 with Total WBC >=3.0 x 10^9/L and Serum Creatine <=2xULN	
	13,227 with Alk Phos <=2xULN and ALT <=2xULN	
	12,980 with AST <=2xULN and Bilirubin <=3xULN	

The protocol inclusion / exclusion criteria is applied to the patient pool and then matching patients are geo-located on the map



#### **Covance Data Insights Show Workload of Key Investigators**

- Investigator patient accrual per study drops as more studies are taken on diminishing return from in-demand sites
- Objective site performance data around the globe which includes 8+ pharma programs and 53 active UC studies
- Creates immediate 963 sites for targeted outreach
- 27 out of 1,054 (3%) of known investigators are <u>not</u> in an active trial



#### Location of Investigator Sites in Relation to Ulcerative Colitis Patients

## **LabCorp**

#### Sample from Seven UK GP Surgeries

BLUE DOTS – Crohn's and UC Patients from EMR SIZE OF BLUE DOTS – Number of Patients STARS – Covance sites COLOR OF STARS – Green high score to red low score



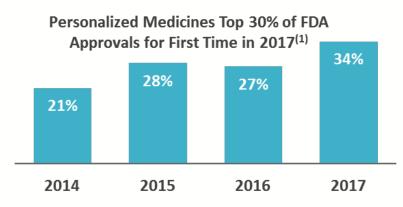


**DOTS** – UC patients who match study design from LabCorp Real World Database **STARS** – High performing Covance sites

### **Companion Diagnostics (CDx) is a Key Driver of Precision Medicine**

### **LabCorp**

- A companion diagnostic is the ultimate biomarker test
  - Co-developed and linked with a specific therapy
  - Help identify patients most likely to respond
  - · Help identify patients who may have an adverse event
  - Provide added value for how the diagnostic and therapy are used
- Genomic and proteomic biomarkers are key features of developing new therapies and diagnostics
- Collaborated with > 40 clients on > 165 CDx projects in 2017



(1) Source: Personalized Medicine Coalition. Personalized Medicine at FDA: 2017 Progress Report.

#### **Covance Provides Comprehensive CDx Solutions For The Drug Life Cycle**



### **Covance Offers a Suite of Differentiated Drug Development Tools for Trial Planning and Execution**

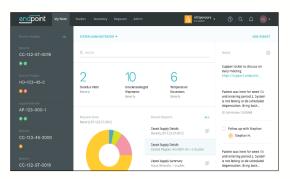


- Metrics and Benchmarking
- Trial Forecasting





- Pulse
- Drive





- Clinical Data Hub
- Monitoring Solutions
- Data Management
- Insights



- **Solutions**
- GlobalCODE
- snapTRACK
- LabCODE



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