
Roche Diagnostics Investor Day 2021

23rd March 2021



Roche Diagnostics Investor Day 2021

Welcome

Karl Mahler | Head of Investor Relations and Roche Group Planning

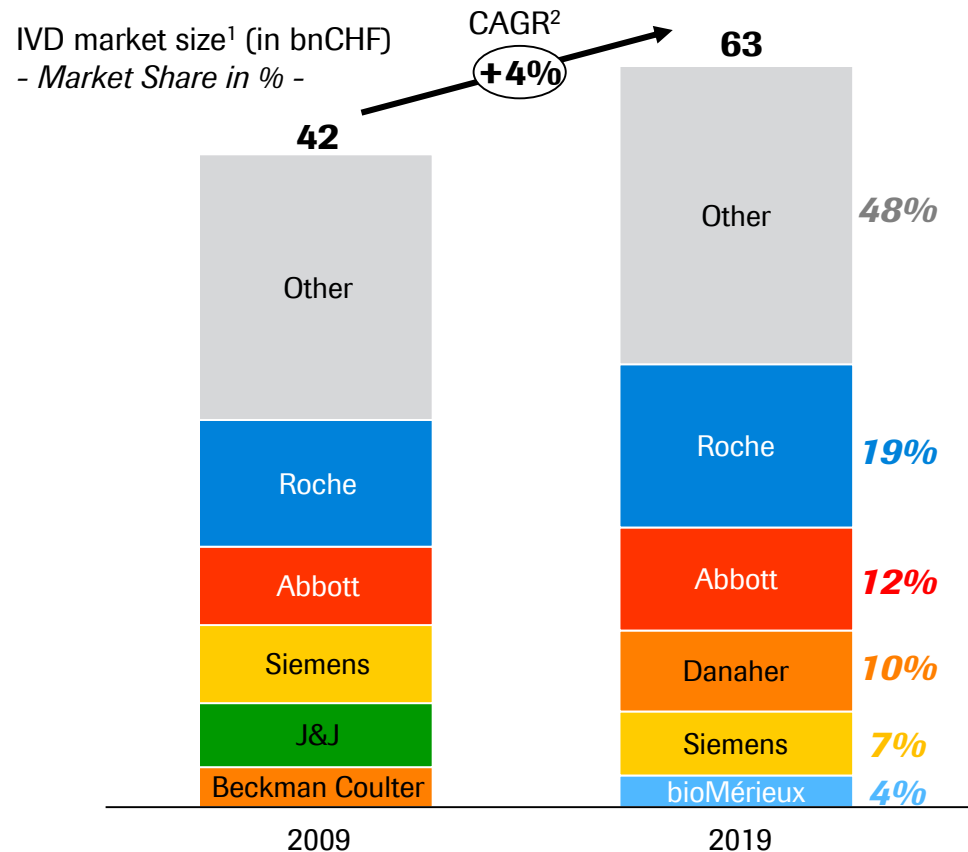
Agenda



Welcome Karl Mahler, <i>Head of investor Relations and Roche Group Planning</i>	2.00-2.40pm
Strategy & Organization Thomas Schinecker, <i>CEO Diagnostics</i>	
Diagnostics Solutions & Customer Areas Ann Costello, <i>Global Head Roche Diagnostics Solutions</i>	
Research & Development Palani Kumaresan, <i>Head of Research & Development</i>	
Q&A Birgit Masjost, <i>Investor Relations Officer, & speaker panel</i>	2.40-3.05pm
Break	3.05-3.10pm
Systems Benjamin Lilienfield, <i>Life Cycle Leader Systems</i>	3.10-3.35pm
Infectious Diseases Michael Hombach, <i>Global Clinical Leader Infectious Diseases</i>	
Cardiology Andre Ziegler, <i>Global Clinical Leader Cardiology</i>	
Oncology Jill German, <i>Global Head of Pathology Lab</i>	
Q&A	3.35-3.55pm
Closing Thomas Schinecker, <i>CEO Diagnostics</i>	3.55-4.00pm

IVD Market has seen consolidation

Roche staying in the lead



Insights

- Roche staying in the lead with 4% growth (CAGR 2009- 2019)
 - broadest menu, highest automation
- Significant M&A activities / consolidation with Abbott (Alere), Danaher (Radiometer, Leica, Beckman Coulter, Cepheid), bioMérieux (BioFire) etc.
- «Other» category has expanded driven by specialty players like Sysmex or low-cost entrants like Mindray (China based)

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Strategy & Organization

Thomas Schinecker | CEO Diagnostics

Roche clear leader in growing IVD market

14 billion CHF revenue in 2020¹

19% share as IVD market leader¹

23.4 billion tests¹

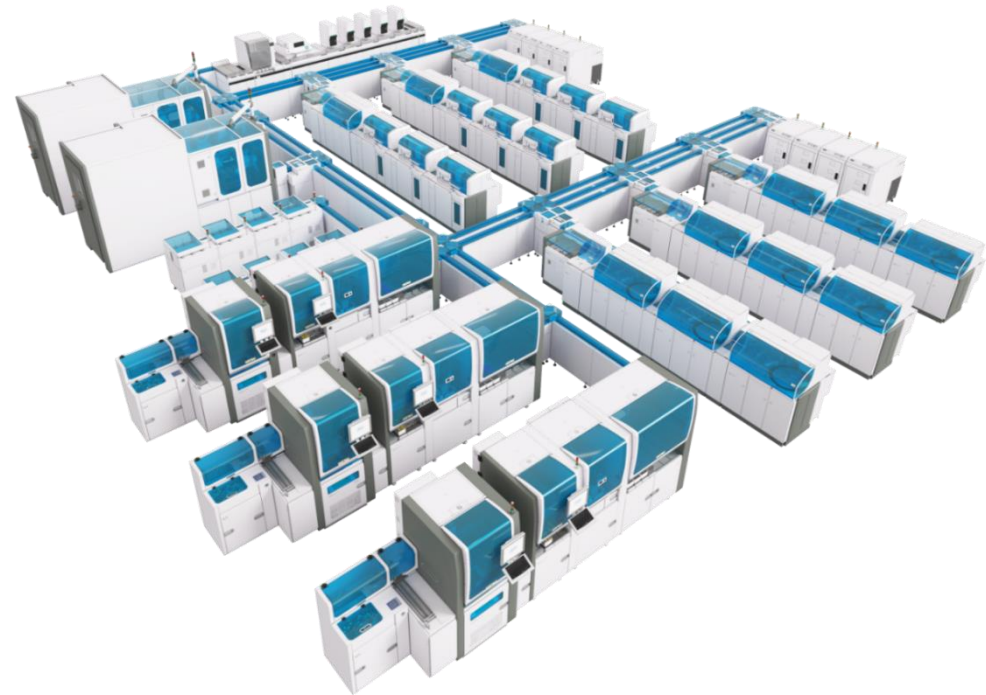
#1 in Clinical Chemistry & Immunodiagnostics

#1 in Molecular Diagnostics

#1 in Tissue Diagnostics

#3 in Point-of-Care Diagnostics

#1 in Workflow & IT



Global transformation exercise

Develop strategic options and recommendations

Strategic topics ...

1	Customers & value pools
2	Diagnostics portfolio segments
3	Digital solutions
4	Geographical focus
5	People & culture
6	Customer centricity & customer experience
7	Fuel innovation engine

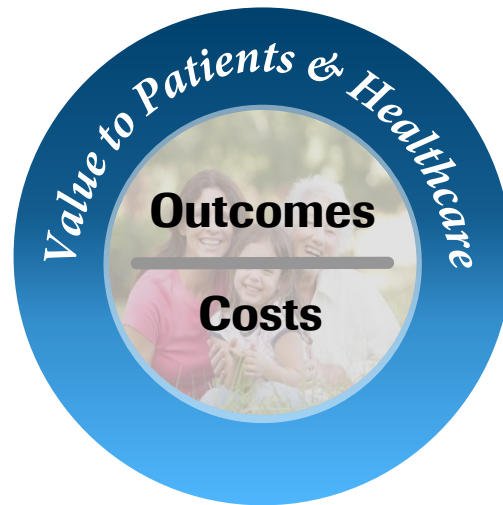
... addressed by cross-functional teams of experts

15+	Workshops
40+	Customers
200+	Experts and leaders
30+	Coaching sessions
400+	Internal & external expert interviews

Healthcare objectives

Improve patient outcomes and reduce costs

Healthcare systems aim to...



Improve outcomes

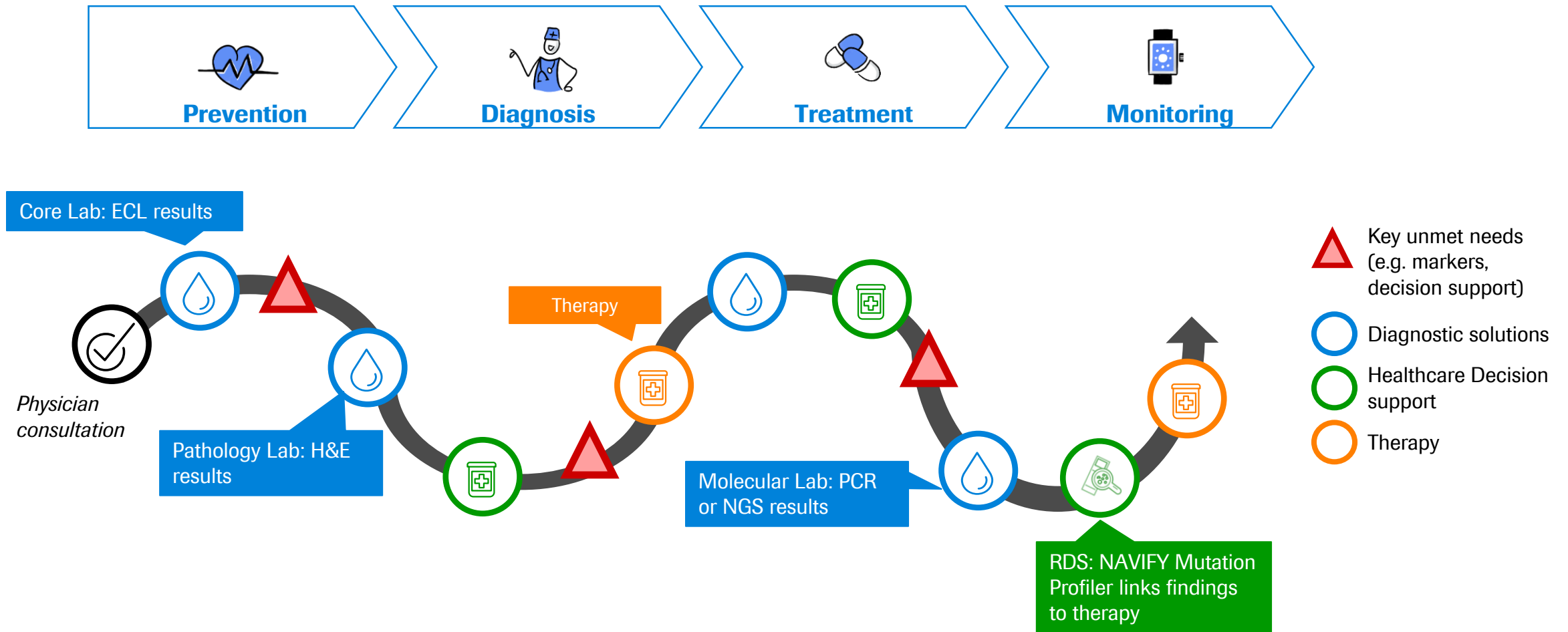
Better outcomes and better social and economic benefits for patients, healthcare providers and the healthcare system as a whole

Reduce costs

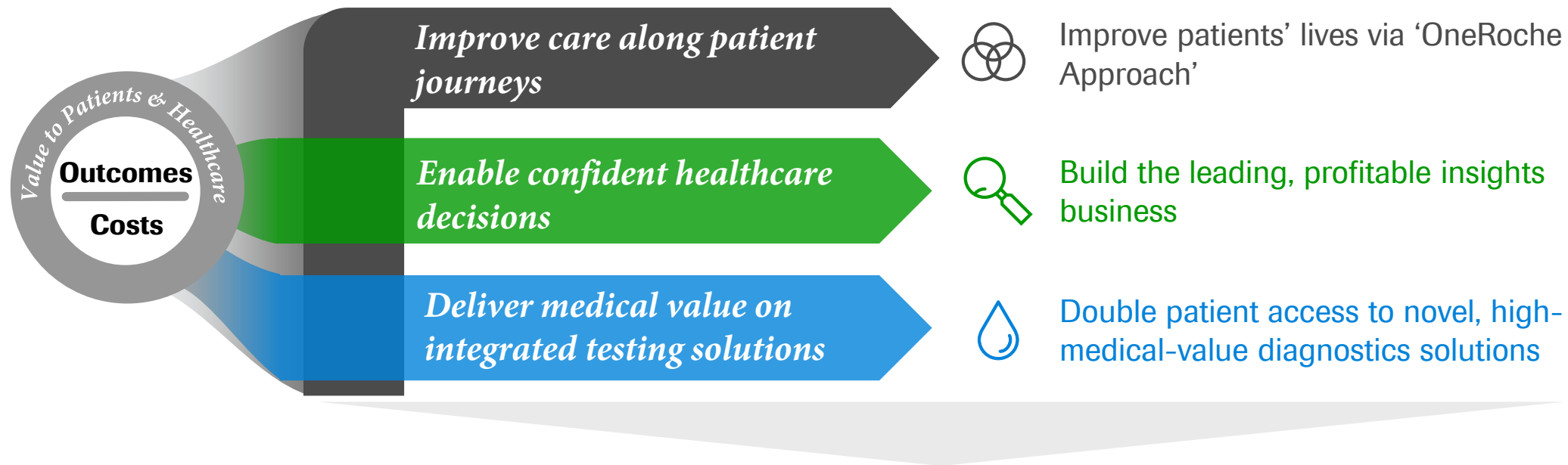
Lower total care delivery costs with more effective prevention, diagnosis, treatments and care along patient journey

Patient journey

Optimising care along the patient journey



Strategy and financial ambitions



Grow **talent**



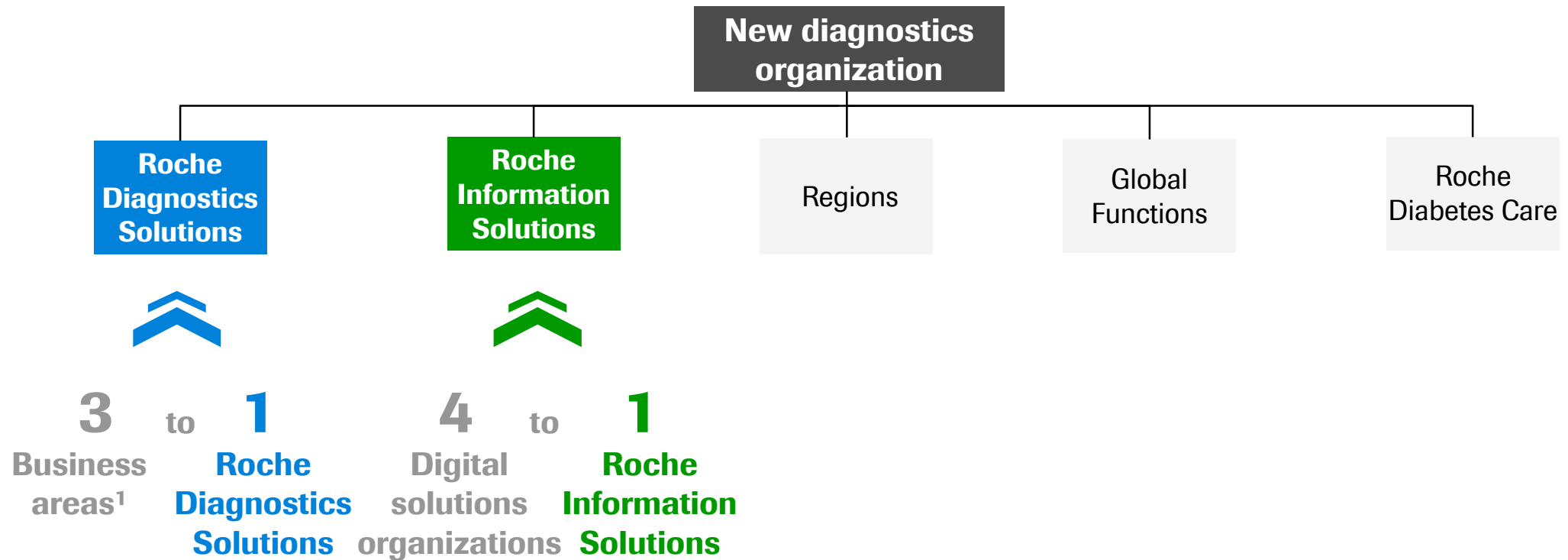
Invest in **strategic priorities**



Grow **market share**

Organizational transformation enabling new strategic priorities

Simplification and focus through customer & function centrality



¹ Roche Diabetes Care excluded based on previous transformation

Diagnostics reporting 2021 onwards

Moving from business to customer areas and adjusting regions

Old

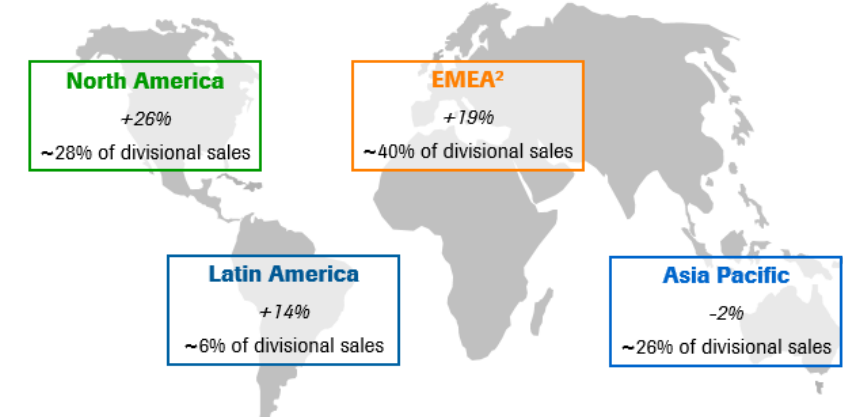
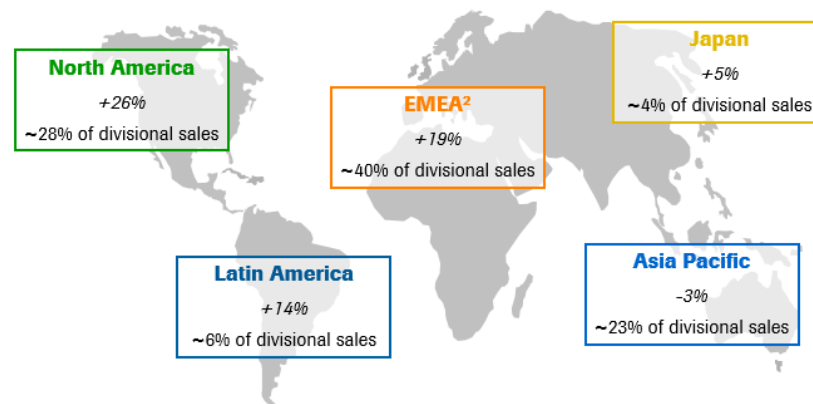
New

Changes in customer areas reporting

	2020 CHFm	2019 CHFm	Change in % CHF	CER
Diagnostics Division	13,791	12,950	6	14
Centralised and Point of Care Solutions	7,273	7,819	-7	-1
Molecular Diagnostics	3,760	2,109	78	90
Diabetes Care	1,670	1,918	-13	-5
Tissue Diagnostics	1,088	1,104	-1	5

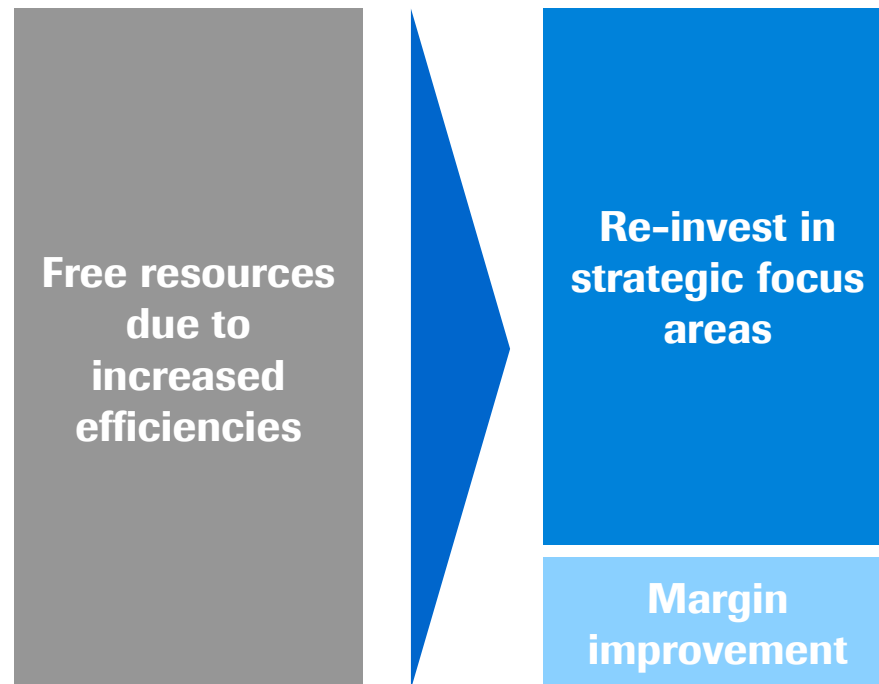
	2020 CHFm	2019 CHFm	Change in % CHF	CER
Diagnostics Division	13,791	12,950	6	14
Core Lab ¹	6,194	7,078	-12	-6
Molecular Lab	3,760	2,109	78	90
Point of Care	1,079	741	46	54
Pathology Lab	1,088	1,104	-1	5
Diabetes Care	1,670	1,918	-13	-5

Changes in regional reporting



Funding the Strategy

Shifting investments into strategic priorities

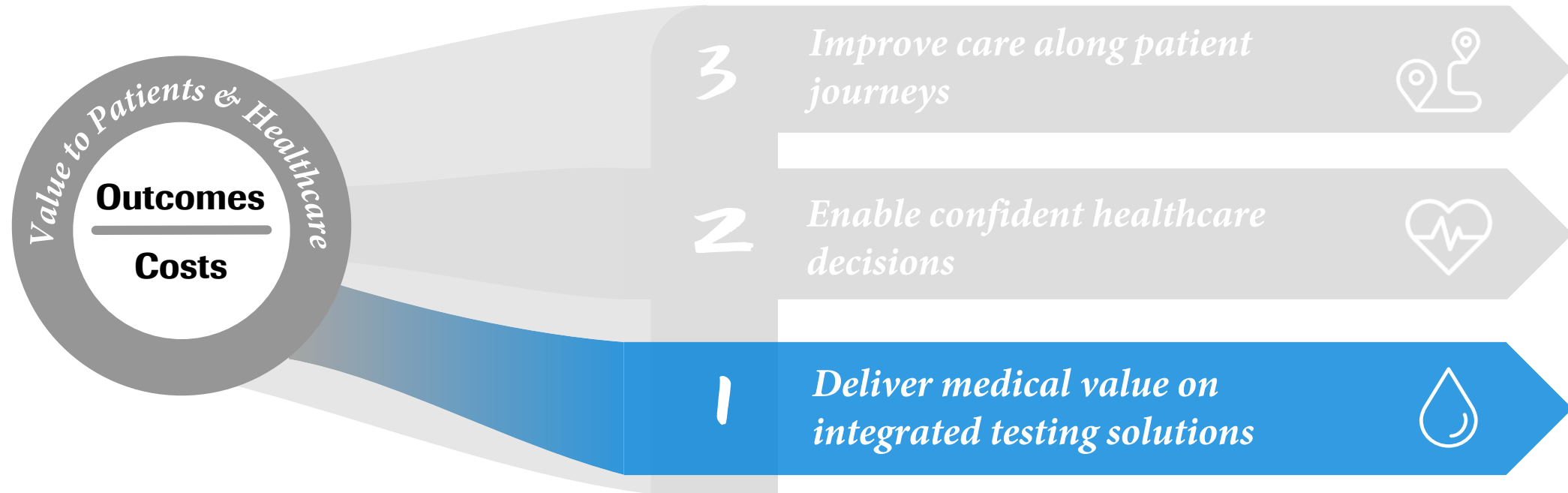


Fund strategic priorities:

- Medical value solutions
- Digital solutions & insight generation
- Disease management
- Access capabilities

Diagnostics solutions

Deliver medical value on integrated testing solutions



Diagnostics Solutions strategic priorities

Developing comprehensive solutions for our customers

Focus on customer solution and experience

Core Labs

Molecular Labs¹

Pathology Labs¹

Points of Care



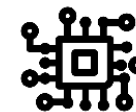
Differentiators



Medical value



Efficiency



Digitalisation

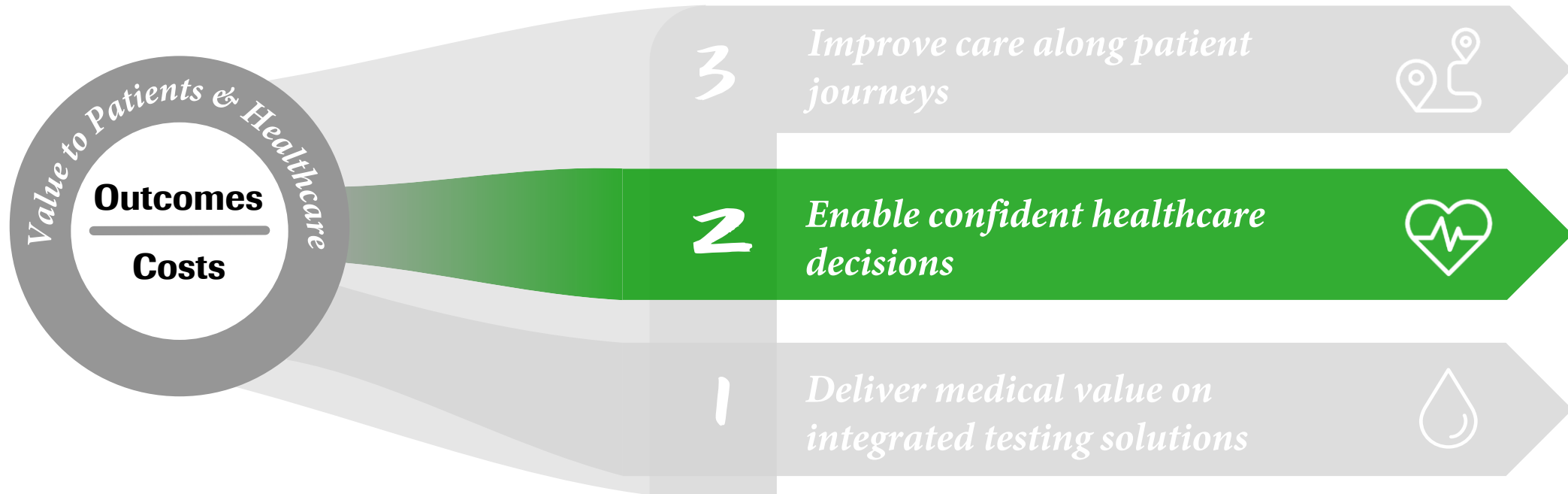


Access

¹ Sequencing as key technology to address needs of molecular and pathology labs customer segments

Healthcare decision support solutions

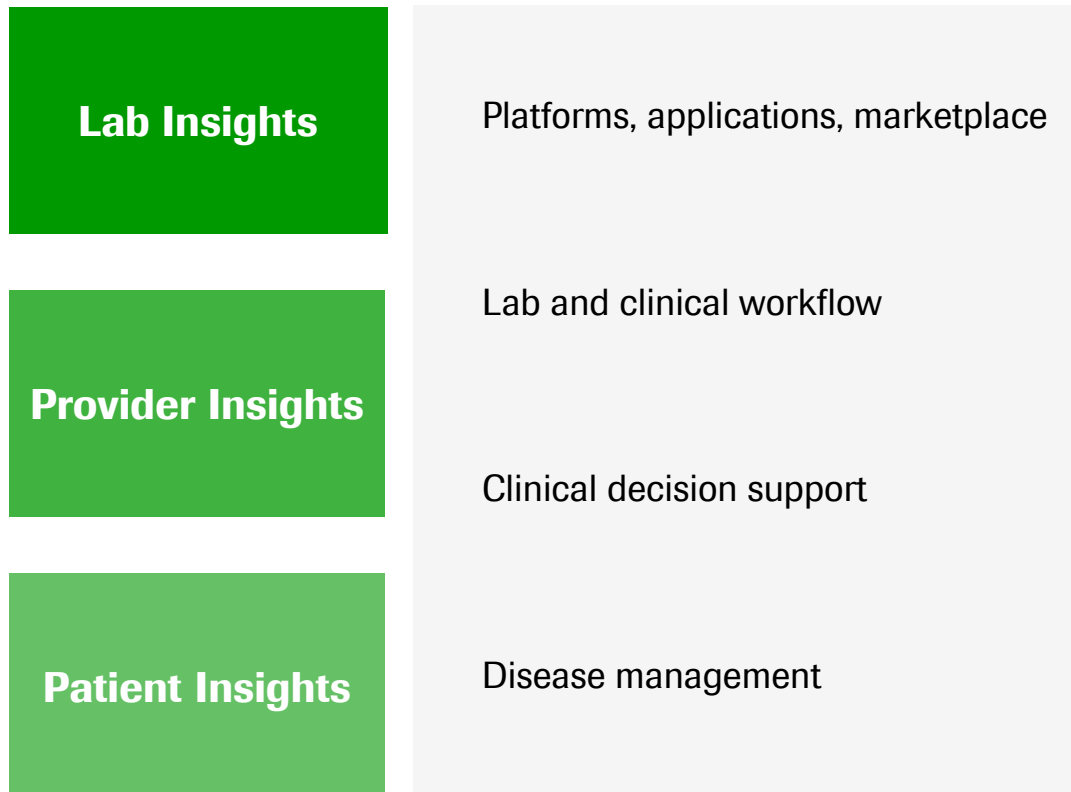
Enable confident healthcare decisions



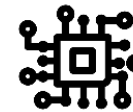
Roche Information Solutions strategic priorities

Supporting healthcare decisions

Focus on customer solutions and experience



Differentiators



Platform



Efficiency



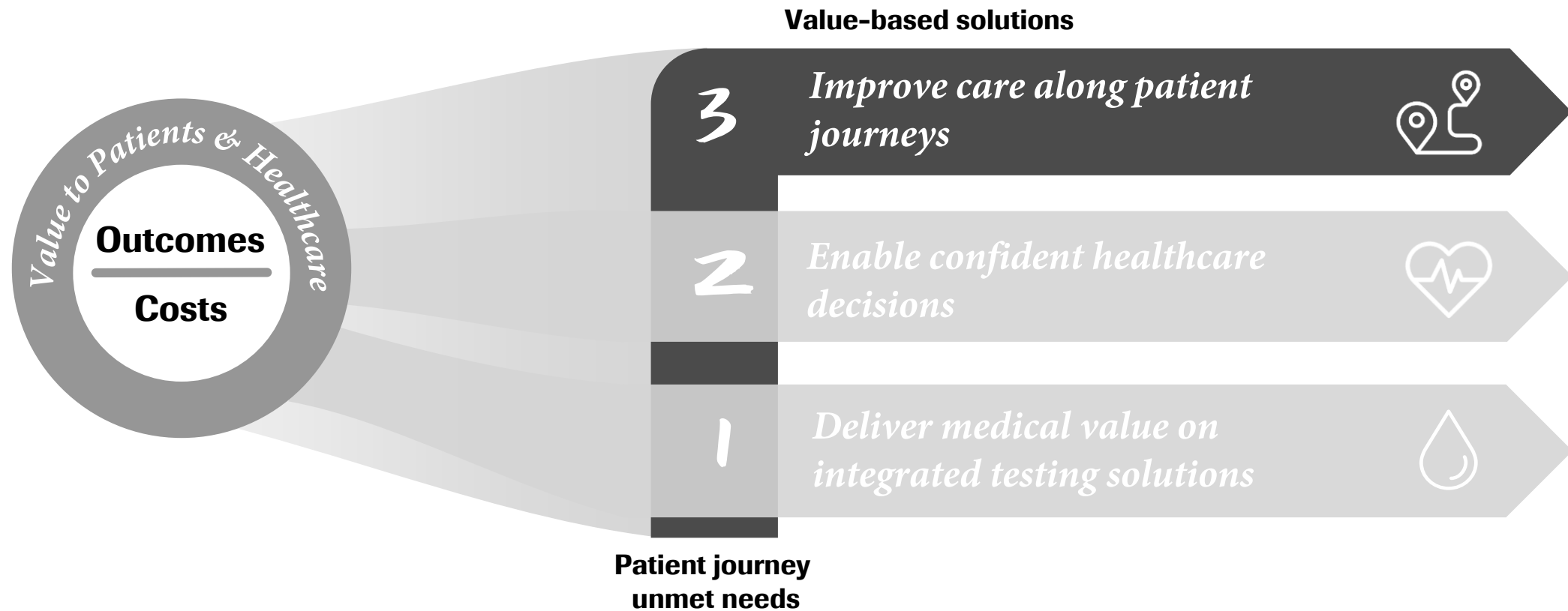
Medical Value



Insight generation

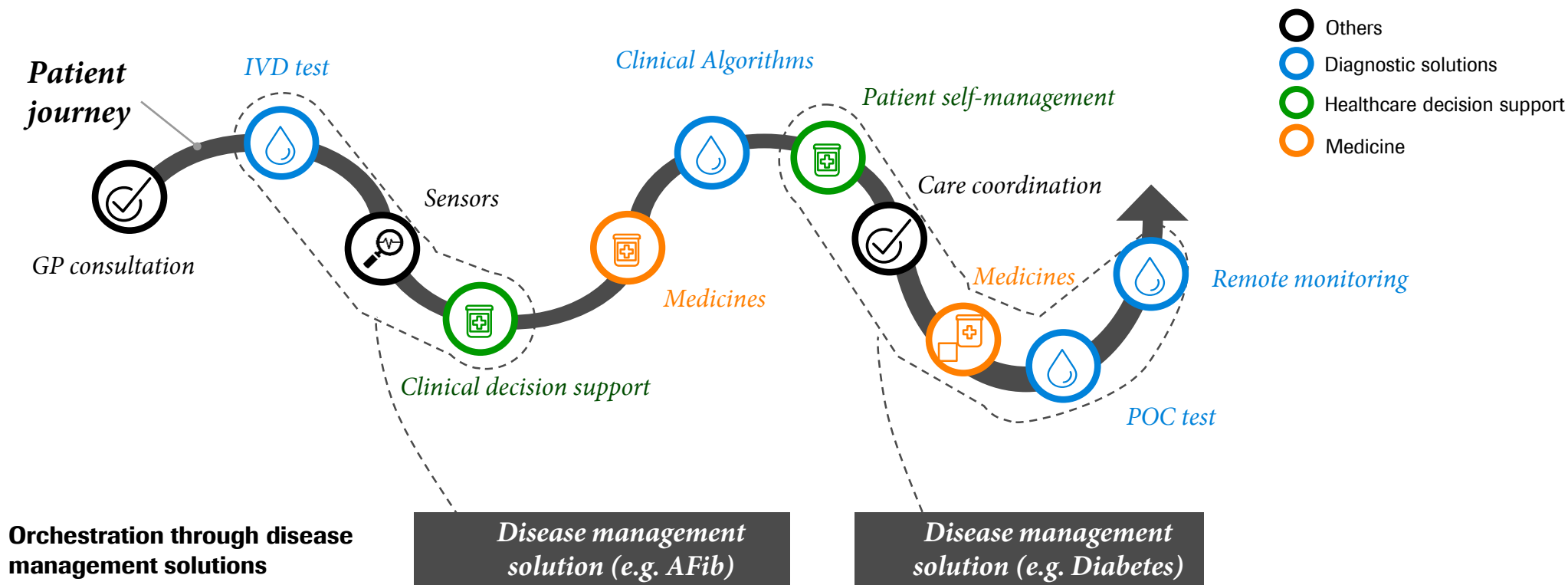
Disease management solutions

Improve care along patient journeys

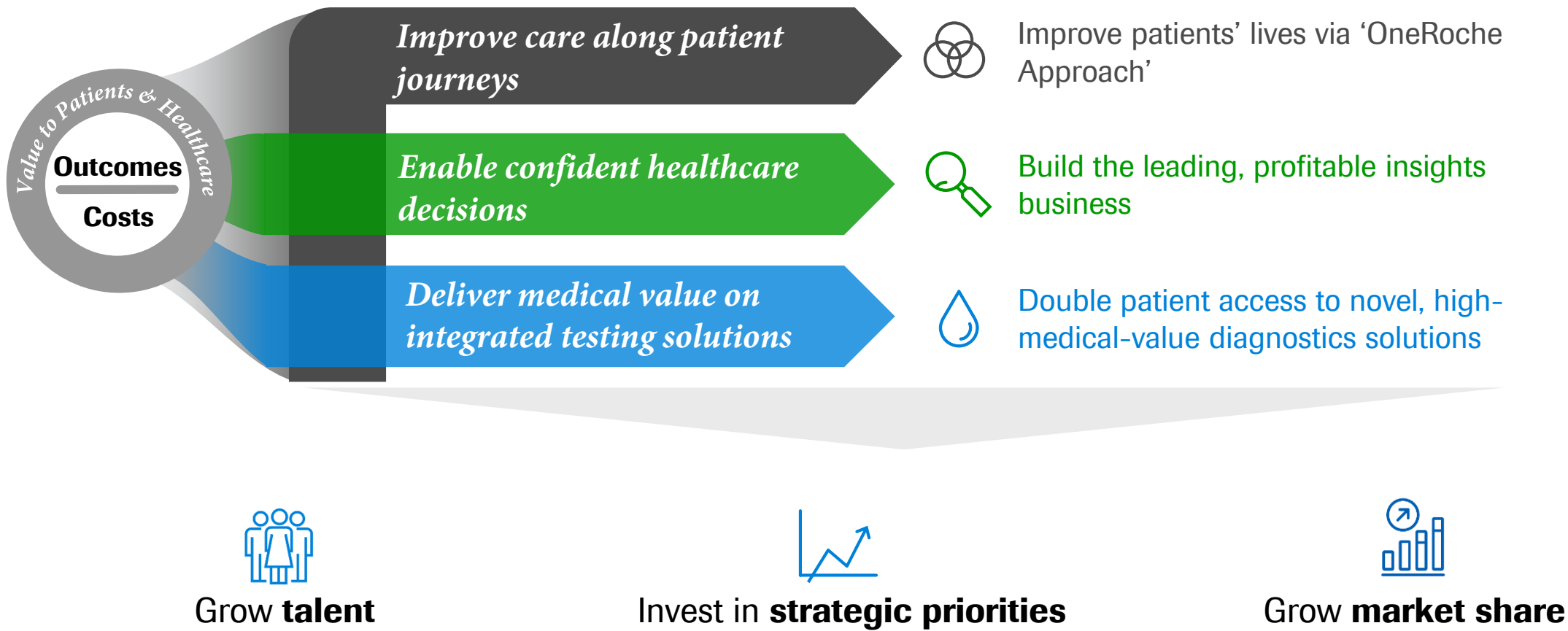


Disease management solutions

Unlocking value through orchestration along patient journey



Strategy and financial ambitions



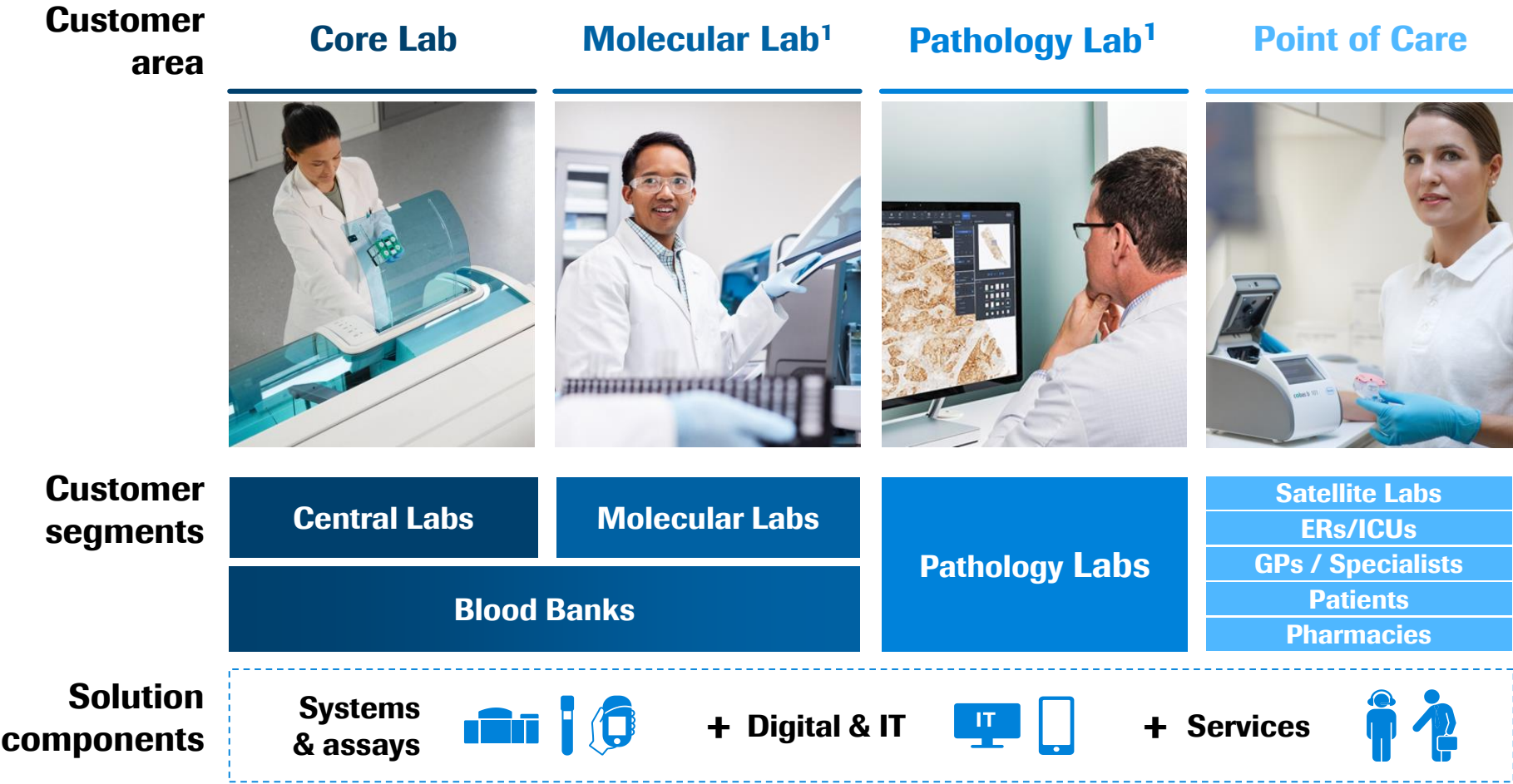
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Diagnostics Solutions & Customer Areas

Ann Costello | Global Head Roche Diagnostics Solutions

Diagnostics solutions: Strategic priorities

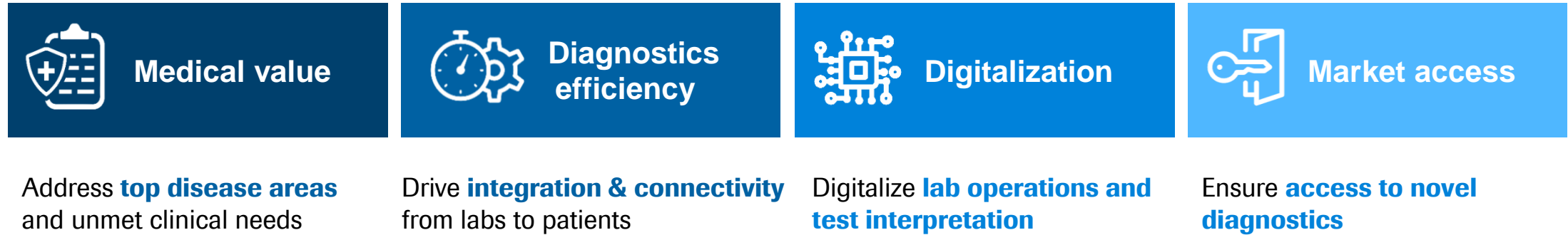
Providing comprehensive solutions for our key customer segments










¹ Sequencing as key technology to address needs of molecular and pathology labs customer segments

Diagnostics solutions: Strategic priorities

Achieving differentiation based on four distinct pillars



Examples of success

 <p>Molecular Lab & Core Lab, Point of Care: 9 FDA Breakthrough Device Designations since 2018</p>	 <p>Molecular Lab: cobas® prime</p>	 <p>Point of Care: cobas® pulse¹</p>	 <p>Pathology Lab: uPath Software</p>	 <p>Point of Care: v-TAC Software</p>	 <p>Molecular & Pathology Lab: Cervical Cancer Screening</p>	 <p>Core Lab: Pre-eclampsia in guidelines</p>
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¹ Product to be launched in 2021

SARS-CoV-2 diagnostics portfolio¹

Comprehensive portfolio of tests and digital solutions

	Clinical Labs	Near Patient
Molecular solutions	<ul style="list-style-type: none"> • cobas® SARS-CoV-2 <i>Launched</i> • cobas® SARS-CoV-2 Variant <i>Launched</i> • cobas® SARS-CoV-2 & Influenza A/B <i>Launched</i> • TIB MOLBIOL LightMix® Modular SARS-CoV-2 <i>Launched</i> 	<ul style="list-style-type: none"> • cobas® SARS-CoV-2 & Influenza A/B <i>Launched</i> • cobas® SARS-CoV-2 <i>In-development</i>
Immunology solutions	<ul style="list-style-type: none"> • Elecsys® Anti-SARS-CoV-2 <i>Launched</i> • Elecsys® Anti-SARS-CoV-2 S² <i>Launched</i> • Elecsys® SARS-CoV-2 antigen <i>Launched⁴</i> • Elecsys® IL-6 Test to diagnose cytokine release syndrome <i>Launched</i> 	<ul style="list-style-type: none"> • SARS-CoV-2 rapid antibody <i>Launched^{3,4}</i> • SARS-CoV-2 rapid antigen <i>Launched^{3,4}</i> • SARS-CoV-2 rapid antigen nasal <i>Launched^{3,4}</i> • SARS-CoV-2 rapid antigen nasal self-testing <i>Launched^{3,4,5}</i> • SARS-CoV-2 & Influenza A/B rapid antigen <i>In-development^{3,4}</i>
Digital solutions	<ul style="list-style-type: none"> • Viewics LabOps COVID-19 for efficiency improvements <i>Launched</i> 	<ul style="list-style-type: none"> • NAVIFY Remote Monitor⁶ <i>Launched</i> • v-TAC⁷ digital algorithm for blood-gas <i>Launched</i> • iThemba Life COVID-19 <i>Launched</i> • cobas Infinity POC COVID-19 <i>Launched</i> • NAVIFY Pass <i>Launched</i>

Investing CHF >600m to increase supply chain capacities

Driving to unprecedented volume in record time

Consumables



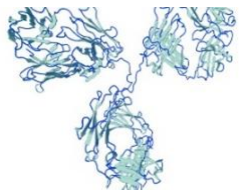
- **60** new manufacturing lines
- **17** locations with 5 new partners

Reagents



- **20** new manufacturing lines
- **4** major facility expansions

- **CHF >600m** investment
- **>1,200** new employees



- **8** new manufacturing lines
- **1** new biotech facility

Raw materials

- **1** new manufacturing space

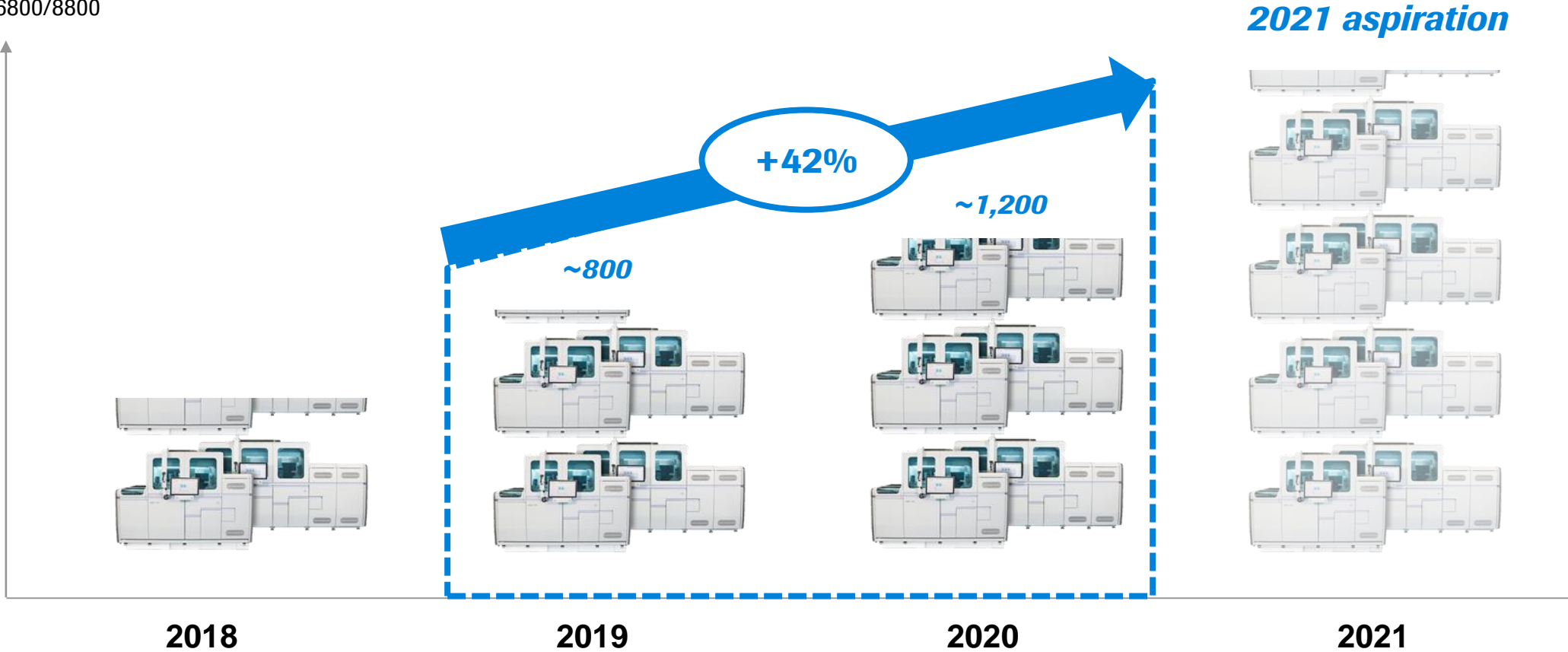


Instruments

Molecular Lab installed base

We significantly increased our footprint in the market

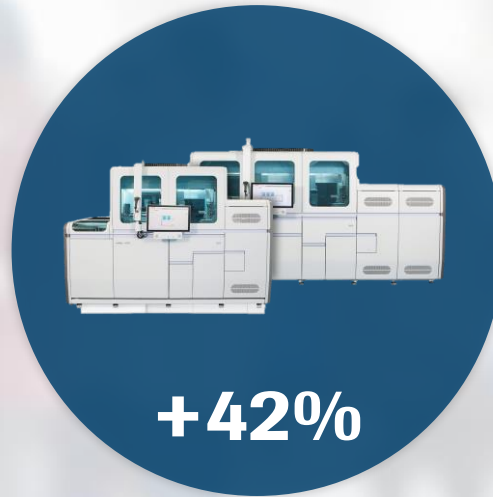
Installed base for
cobas® 6800/8800



Levering our installed base in the future

Enabler to sell high medical value biomarkers

Further consolidation of labs
& customer preference for
fully automated solutions



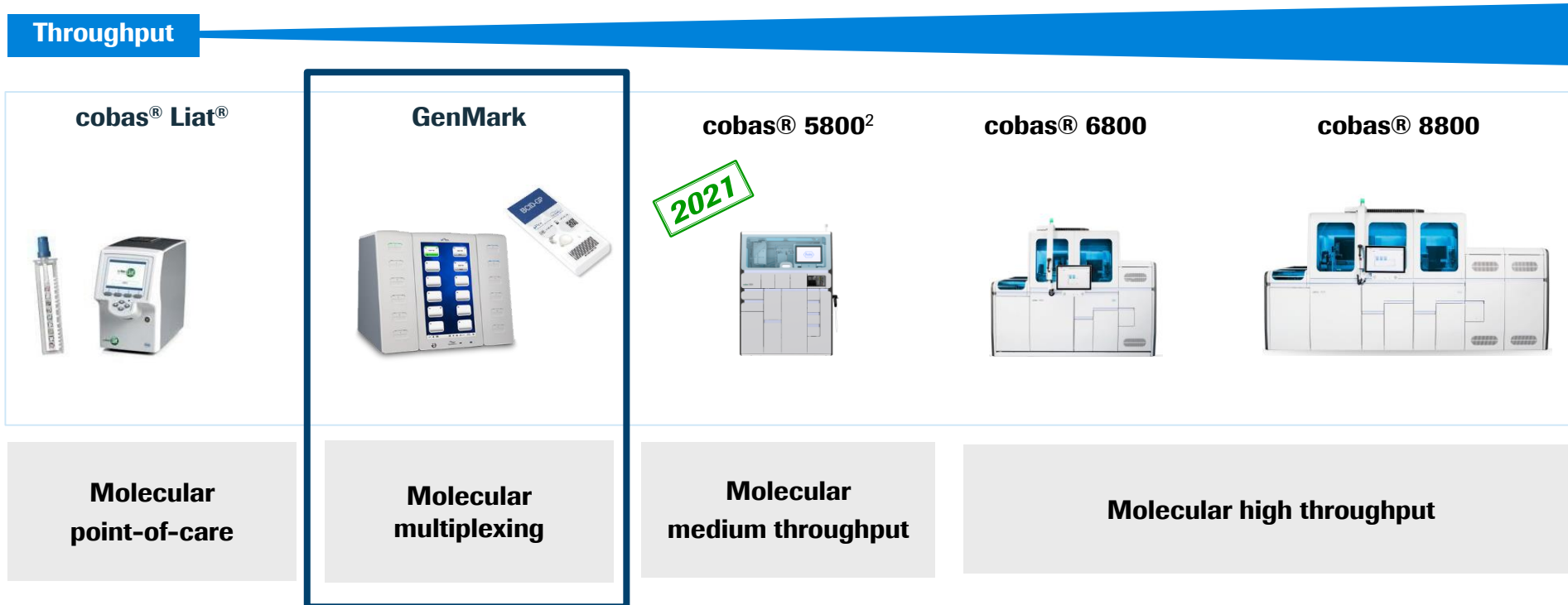
Increase of installed base for
cobas® 6800/8800 in 2020

Our aim to bring more
menu to installed base
focusing on medical value

We built a strong position for sustainable performance

Roche molecular solutions portfolio

GenMark¹ Diagnostics fills the portfolio gap in molecular multiplexing



¹ GenMark Diagnostics offering is subject to successful closing of the merger agreement dated March 12, 2021; ² Currently in development and not commercially available

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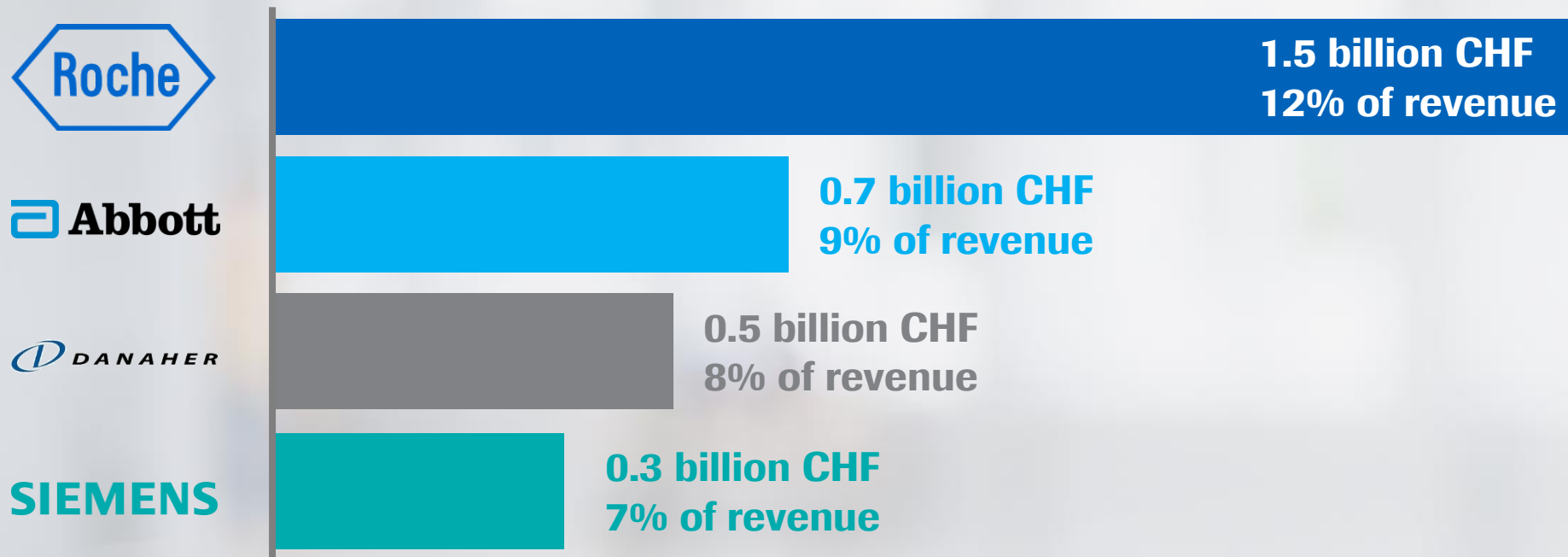
Research & Development

Palani Kumaresan | Head of Research & Development

Our commitment to innovation

We invest more in our IVD portfolio than other companies

125 CHF million per month



R&D investments as percentage of revenue for 2019

R&D efficiencies

Implementing our new strategy will improve productivity



Increase organizational effectiveness

- Improved standardization and cross-pollination of best practices
- Greater shift of funds to projects versus non-project activities

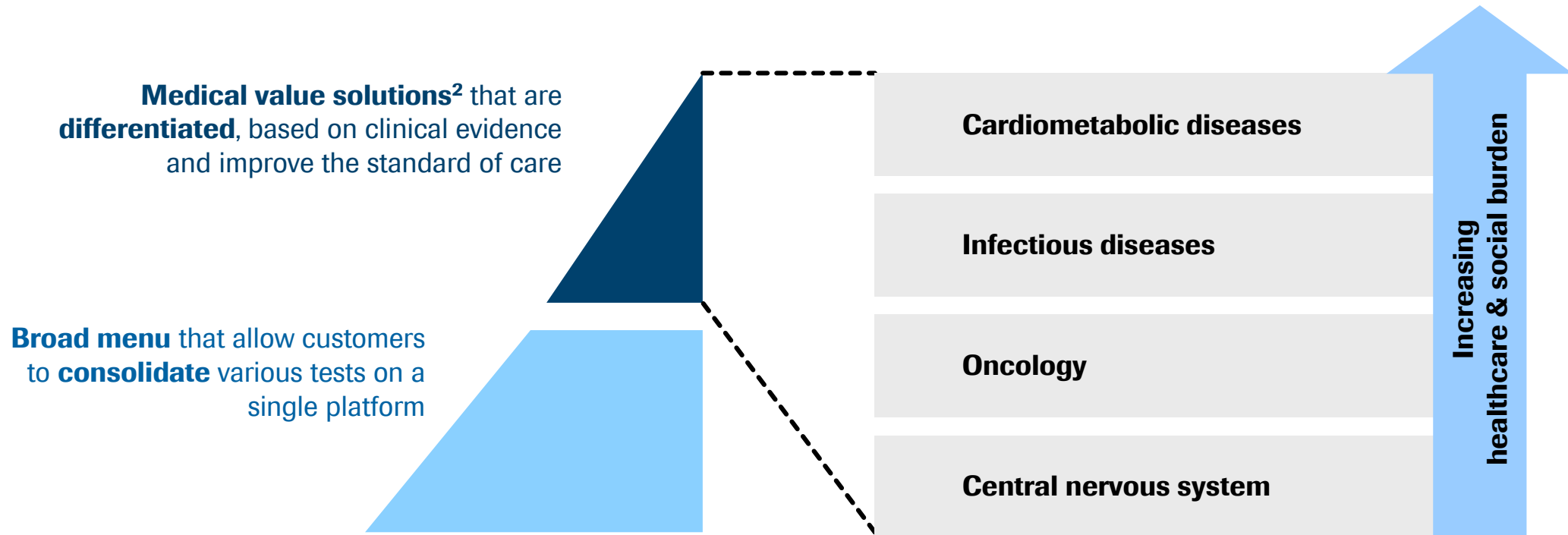


Improve project delivery

- More rigorous portfolio prioritization
- Internalize learnings from unprecedented development timelines of COVID solutions

Strategy around menu expansion

Broadest menu and most differentiated medical value solutions

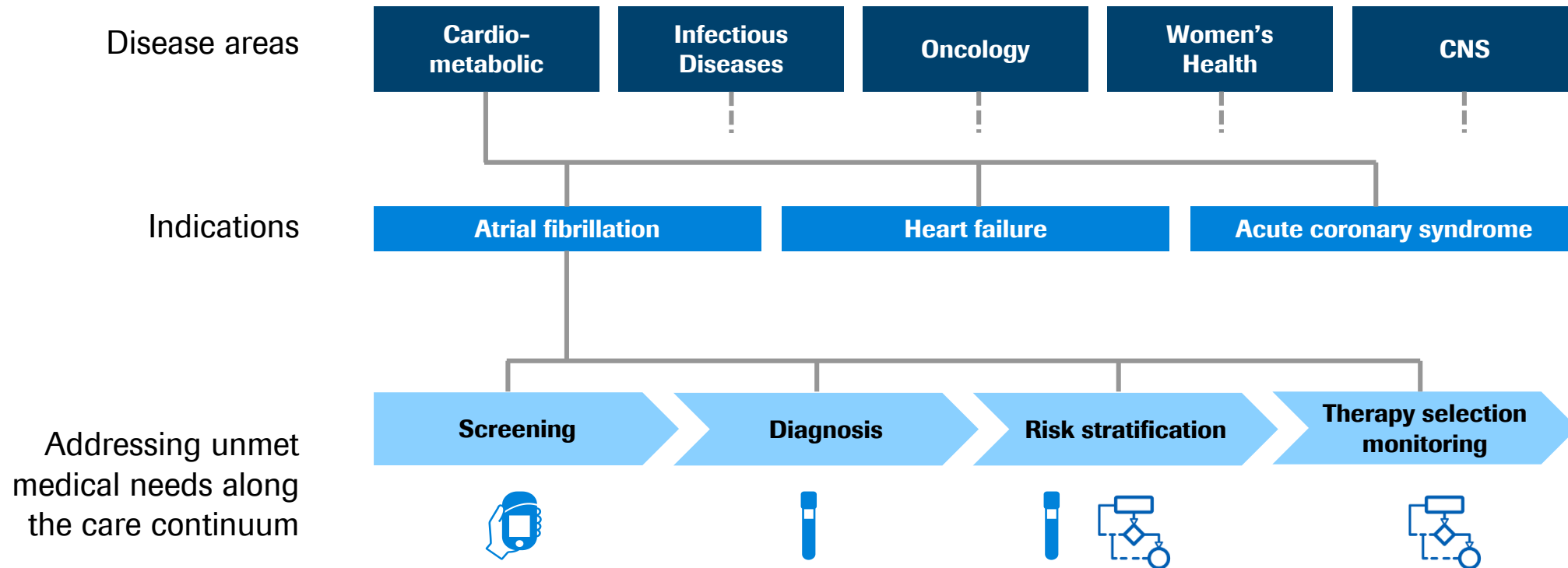


With medical value solutions & broad menu we address top healthcare burdens¹

¹ Based on Divisional Medical & Scientific Affairs definitions and disease burden; ² Including both top disease burden areas and other disease areas

Approach to medical value solutions

Multi-modal, multi-parametric approach along continuum of care



Digital Solution



Biomarker



Clinical Algorithms

A broad portfolio of solutions across the care continuum

Disease area	Indication	Screening	Diagnosis	Risk stratification	Therapy selection / monitoring
Cardio-metabolic	Atrial fibrillation	●	●	● ● ○	●
	HF (incl. HF in T2D)	●	● ●	● ●	● ●
	ACS	●	● ●	● ● ○	●
Infectious Diseases	Sepsis		● ●	●	●
	Tuberculosis	○	●	○	●
	Vector-borne disease	●	●	○	
	Hepatitis		● ○		● ●
	Respiratory viruses	●	● ●	○	○
Oncology	Lung	○	● ○		● ●
	Breast		● ● ○	● ○	● ●
	GU, GI, Melanoma	●	● ● ○	○	● ●
	Liver	● ○	○	○	○
Women's Health	Endometriosis		○	○	○
	Carrier screening		○		
CNS	Alzheimer's disease	○	● ○	○	● ○
	Parkinson's disease				●

ACS: Acute Coronary Syndrome
 HF: Heart failure; T2D: Type 2 Diabetes;
 GU: genitourinary; GI: Gastrointestinal;
 CNS: Central nervous system



Core Lab



Molecular Lab



Pathology Lab



Point of Care



On market



In development








Under evaluation

Recent Breakthrough Device Designations (BDDs)

Leading innovation recognized by the FDA



Infectious diseases	Oncology	Women's health	CNS	Others
 <p>cobas® EBV: EBV in transplant patients</p> <p>cobas® BKV: BKV in transplant patients</p>	 <p>FACT CDx (liquid biopsy assay): 70 oncogenes + MSI + bTMB</p> <p>Elecsys® GALAD score: Diagnosis of early stage hepatocellular carcinoma</p> <p>Elecsys® GDF-15: GDF-15 in cachectic patients with solid tumors¹</p>	 <p>Elecsys® sFlt-1/PlGF: rule-out of Preeclampsia within 1 week</p>	 <p>Elecsys® β-Amyloid and Elecsys® p-Tau in Cerebro Spinal Fluid assays: PET concordance and progression in Alzheimer's Disease</p>	 <p>CoaguCheck® Direct-X: Patients on Factor Xa</p>

Key launches 2021



	Area	Product	Description	Market ¹
Instruments	Core Lab	cobas [®] pure integrated solutions	Low-to-medium volume SWA	CE
		cobas [®] pro integrated solutions	New high throughput configurations of the cobas pro instrument	US & CE
	Point of Care	cobas [®] pulse	Successor of Accu-Chek [®] Inform II	CE
	Molecular Lab	cobas [®] 5800	Fully automated low throughput PCR system	CE
		AVENIO Edge System	Automated sequencing library preparation and target enrichment instrument	WW
	Diabetes Care	Accu-Chek Instant	New features for the monitoring system to increase performance and user experience	WW
Tests	Core Lab	Elecsys [®] SARS-CoV-2 Antigen	Automated laboratory assay intended as an aid in the diagnosis of SARS-CoV-2 infection	US
		Elecsys [®] NT-proBNP IU • extensions in Heart Failure • extension for Atrial Fibrillation Elecsys [®] TnT-hs 3 claim extensions in Coronary Arterial Disease	A set of 5 intended use extensions in the Coronary Arterial Disease, Atrial Fibrillation and Heart Failure Space	CE
	Molecular Lab	AVENIO FoundationOne kit (RUO)	Decentralized kit of the FoundationOne test	WW
		KAPA HyperPETE kit	New targeted sequencing portfolio using primer extension for small targets	WW
Digital Solutions	Pathology Lab	uPath 2.0	First IVD release and version of Open API of the clinical pathologist workflow module for NAVIFY Digital Pathology & on-premise uPath	WW
		RUO Algorithms	Whole slide image analysis algorithms (ER (SP1), Ki-67 (30-9), and PR (1E2))	WW
	Insights	NAVIFY Oncology 1.0	Modular Oncology decision support solution	WW ³
		NAVIFY Pass 1.0	Solution for providers to communicate SARS-CoV-2 rapid antigen test results to a mobile app	US & CE ³
	Core Lab	Elecsys [®] GAAD Algorithm	Algorithm for early detection of HCC in patients with chronic liver disease.	CE
	Diabetes Care	RocheDiabetes RemoteCare	Module within the RocheDiabetes Care Platform enabling remote interactions between HCPs and patients, including a patient dashboard, check-in and chat functionality	WW ³
		Accu-Chek SugarView	Meter-free blood glucose testing using a smartphone app and test strips	OUS ³

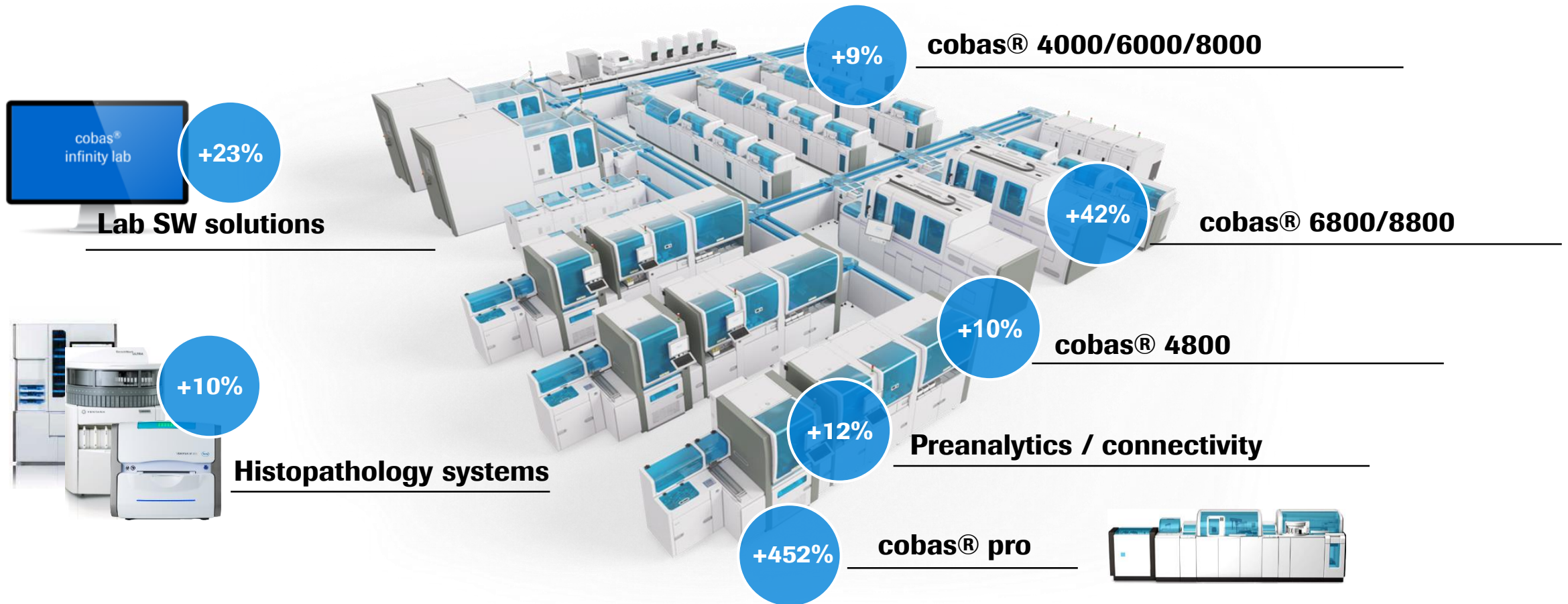
Q&A

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Systems

Benjamin Lilienfeld | Life Cycle Leader Systems

Largest installed base worldwide with significant growth in 2020



cobas[®] 6800/8800 menu expansion driving growth in molecular

Further growing the installed base in 2021

Donor Screening		Blood Borne Disease		Sexual Health		Transplant		Respiratory		Antimicrobial Stewardship	
MPX	✓	HIV-1	✓	HPV	✓	CMV	✓	Flu A/B & RSV	✓	MTB-RIF/INH	✓
WNV	✓	HBV	✓	CT/NG	✓	EBV	✓	Not available in the US		Not available in the US	
DPX	✓	HCV	✓	TV/MG	✓	BKV	✓	MTB	✓	C.diff	✓
HEV	✓	HIV-1/2 Qual	✓	PivNG	✓	ADV Quant	✓	Not available in the US		Not available in the US	
Not available in the US		HSV-1/2/VZV	✓	HPV Self-sampling		Not available in the US		MAI	✓	MG Resistance	
CHIKV/DENV	✓	HBV RNA (IA)	✓	CE-IVD in 2022		HSV-1/2/VZV	✓	Not available in the US		CE-IVD in 2022	
Not available in the US						Not available in the US		SARS-CoV-2	✓	GC Resistance	
Zika	✓							EUA & CE-mark		CE-IVD in 2022	
Babesia	✓							SARS-CoV-2 & Flu A/B	✓		
								EUA & CE-mark			
Malaria								SARS-CoV-2 Variant			
Global launch in 2023								(RUO in 2021)			
								Influenza A/B & RSV			
								(CE-IVD in 2021)			
								AMER			
								(CE-IVD in 2021)			
								Parainfluenza 1-4			
								(CE-IVD in 2021)			
								MPLX Respiratory			
								(CE-IVD in 2022, US-IVD in 2023)			

Installed instrument base >1,200

~400 new placements in 2020

Launched in 2020

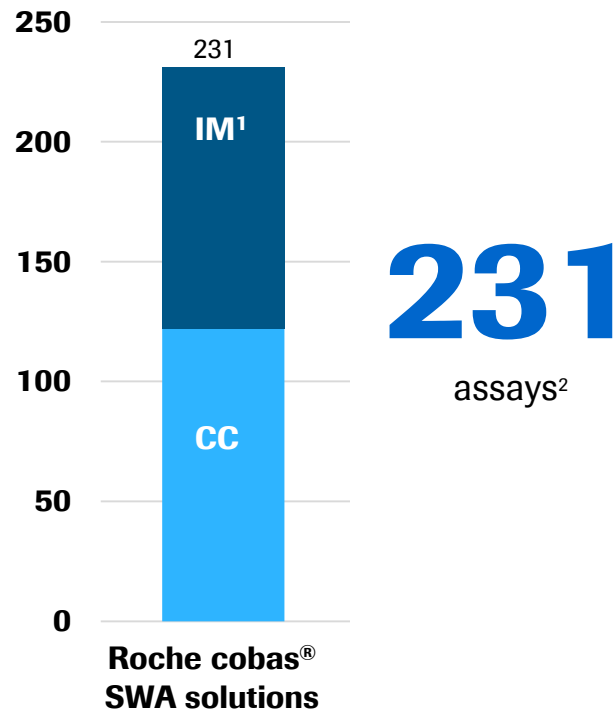
In development

MPX=multiplex detection of HIV-1, HIV-2, HCV and HBV; WNV=West Nile virus; DPX=duplex detection of parvovirus B19 and HAV; HEV=Hepatitis E virus; CHIKV=chikungunya virus; DENV=Dengue virus; CMV=Cytomegalovirus; MTB=Mycobacterium tuberculosis; MAI=Mycobacterium avium-intracellulare infection; RIF=rifampicin; INH=isoniazid (detection of RIF/INH resistance in MTB positive samples); TV=trichomonas vaginalis; MG=mycoplasma genitalium; Babesia=detection of babesiosis caused by tick-borne parasites; EBV=Epstein-Barr virus post-transplant monitoring; BKV=BK virus post-transplant monitoring; ADV=Adenovirus post-transplant monitoring; HSV-1/2/VZV=multiplex detection of Herpes simplex virus 1 and 2 and Varicella-zoster virus; MPLX=detect and discriminate multiple (up to 14) pathogens associated with a clinical syndrome, including SARS-CoV-2; Malaria=mosquito-borne infectious disease; SARS-CoV-2=2019 novel coronavirus; HSV=Herpes Simplex Virus; VZV=Varicella-zoster virus, the cause of chickenpox and herpes zoster (also called shingles); PivNG=Neisseria Gonorrhoeae Piv Gene Target; CG=Neisseria gonorrhea (NG)--aka Gonococcus (GC); ADV=Adenovirus; AMER=ADV (Adenovirus), hMPV (Human metapneumovirus), EV/RV (Enterovirus/Rhinovirus)

Roche Serum Work Area menu

Broadest menu on one integrated platform

Breadth of assay menu



Launched in 2020 & upcoming launches in 2021

Immuno chemistry assays	
HBsAg II Auto Conf	EBV EBNA IgG
Androstenedione	EBV VCA IgG
Anti-SARS-CoV-2	EBV IgM
Anti-SARS-CoV-2 S	Anti-p53
SARS-CoV-2 Ag	HCV Duo
IL6 (EUA)	GAAD
HIV Duo	NT-proBNP claim extension ⁴
	TnT-hs claim extension ⁴
	PCT CE claim extension ⁴
	Vit D total III ⁴
	Preeclampsia
	Anti-HBe
	Alzh CSF biomarkers
	PIVKA II







Clinical chemistry assays	
Kappa FLC ³	ASTP2 ⁴
Lambda FLC ³	ALTP2 ⁴
sdLDL ³	Fentanyl ³
fCal ³	Ethyl Glucuronide ³
CRP ⁴	sTfR Gen 2 ⁴
A1MG ^{3,4}	Benz 2 ⁴
	Sirolimus

On market (Launched in 2020)	In development (to be launched in 2021)
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IM: Immunochemistry; CC: Clinical chemistry; ¹ Not including confirmatory tests, stat tests and special assays in the allergy panel. Variants of the same assay (e.g. for HIV AG/Ab, different kit sizes) are counted once; ² Core unit| ISE |c 702 | c 702 | e 801 | e 801; ³ Partner Channel; ⁴ Product update

New systems launches in 2021

Enabling comparable results in different size laboratories

	Throughput		
Serum Work Area solutions	cobas® pure ¹	cobas® pro	cobas® pro (high throughput)
			
Molecular solutions	cobas® 5800 ¹	cobas® 6800	cobas® 8800
			

Improved outcomes

Family concept addressing needs of all lab sizes to increase access

Increased profitability

Up to 50% lower SMCs per test and 20% lower service cost

More sustainable

Up to 80% less plastic waste per test

¹ Currently in development and not commercially available

Live Stream Demo



New innovations driving market access

Mass Spectrometry *First fully integrated mass spectrometry*



- **Integration** of mass spec into the Core Lab
- Sample in - result out
- **Increase patient access** to mass spec technology
- Promising new **high medical value** biomarkers

CHF 2.1 billion accessible market

Emerging Market Analyzer *Routing testing in remote areas*



- Designed for the **specific needs of emerging markets**
- **Compact, easy-to-operate** benchtop analyzer
- Combines **immunochemistry and clinical chemistry** into one box

CHF 2 billion accessible market

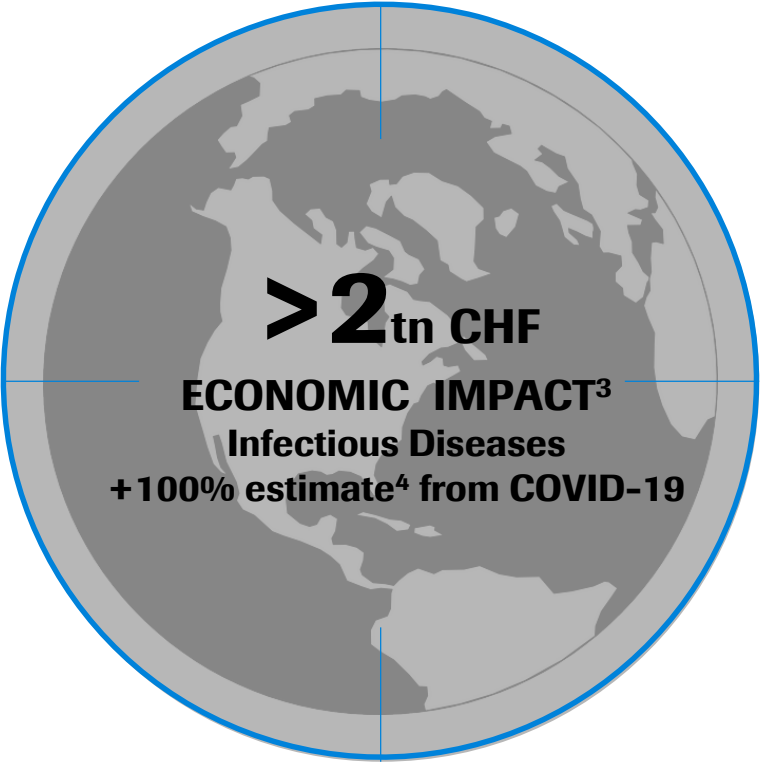
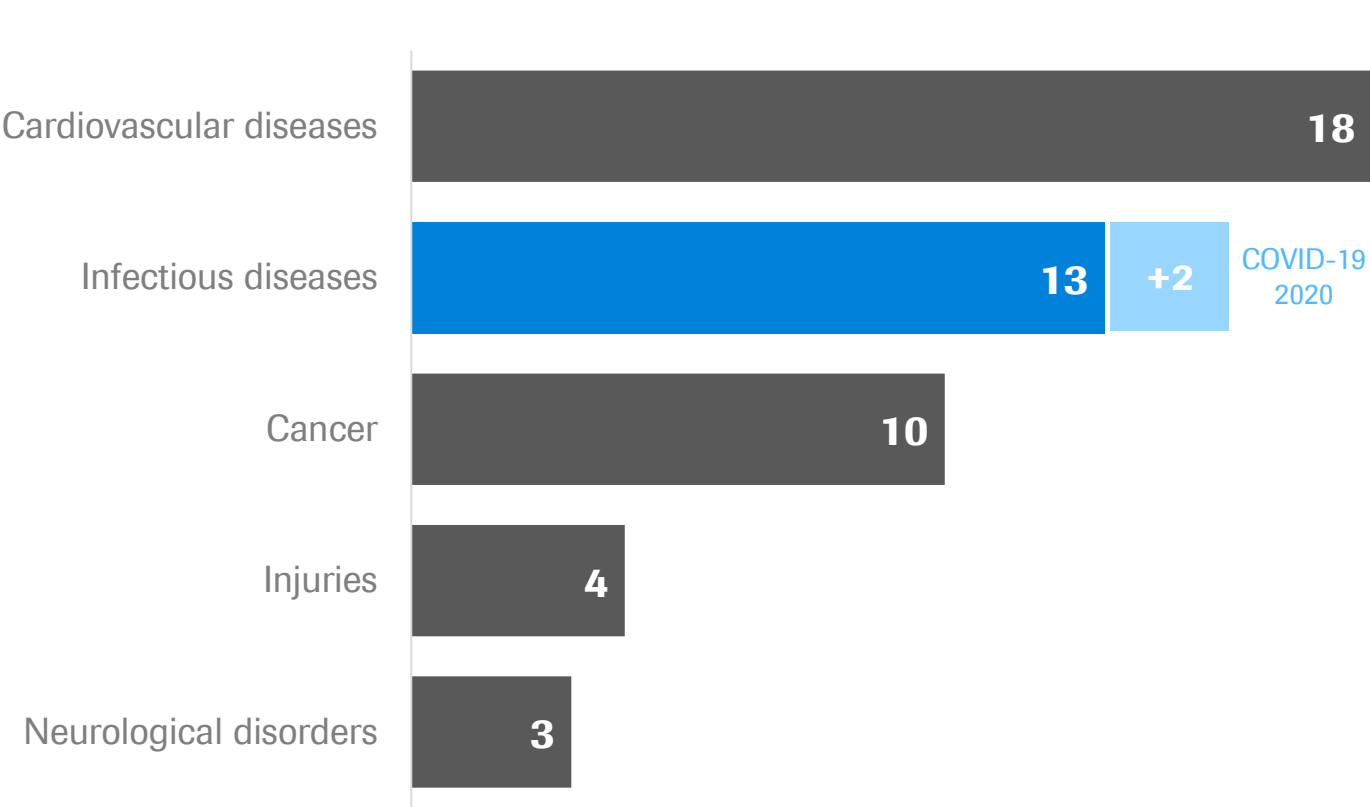
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Infectious Diseases

Michael Hombach | Global Clinical Leader Infectious Diseases

Infectious Diseases are still causing global harm

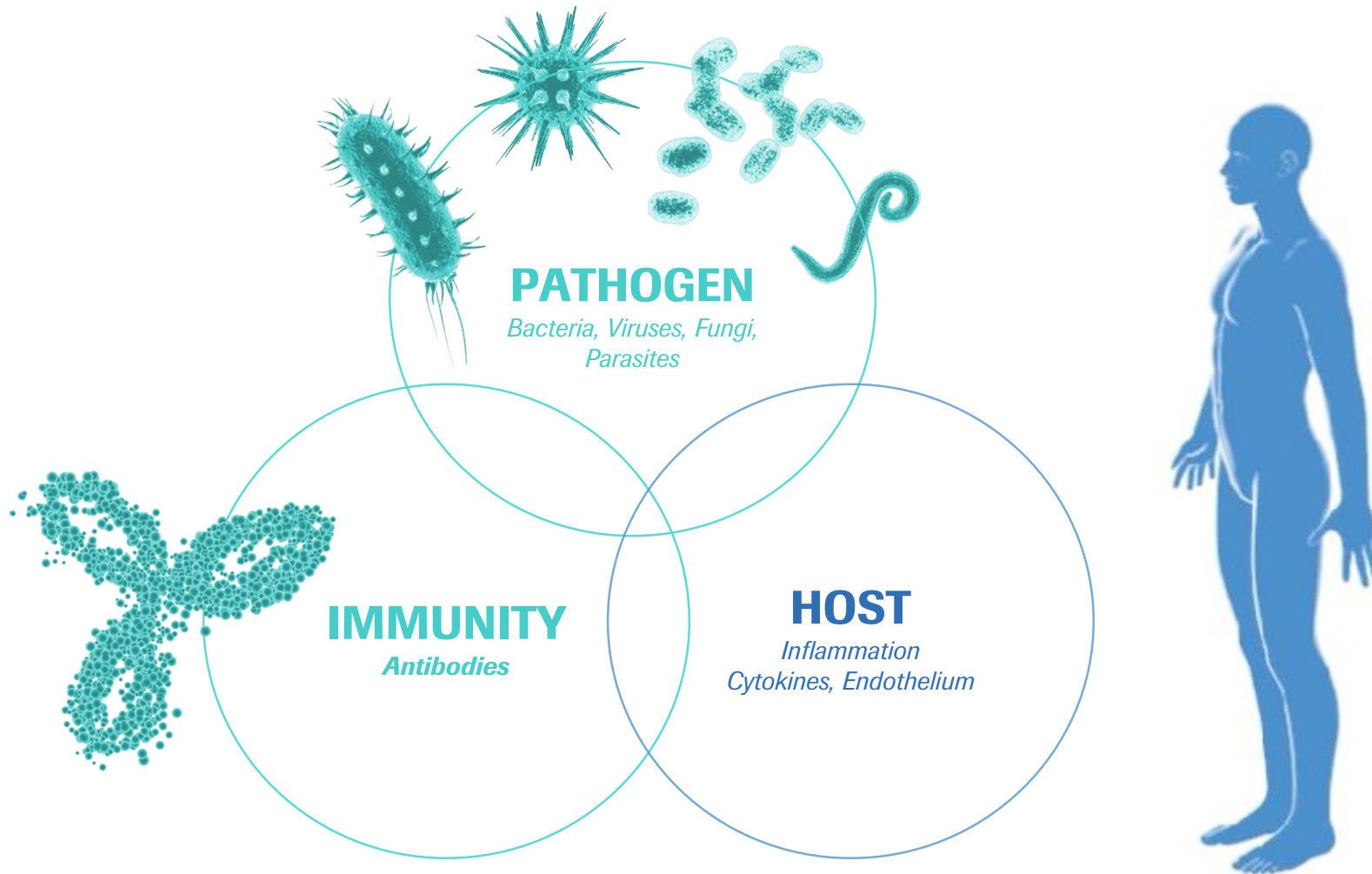
Cause of death globally (millions per year)^{1,2}



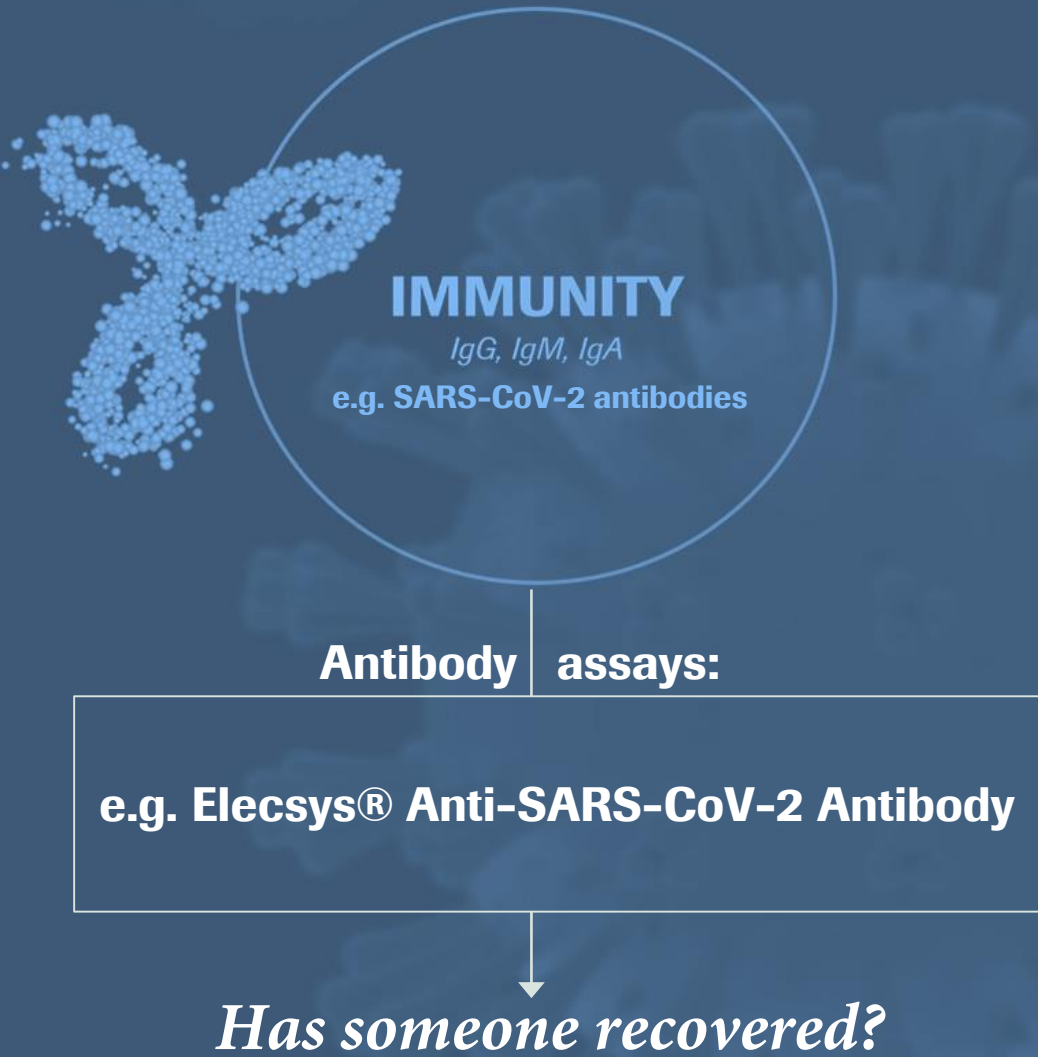
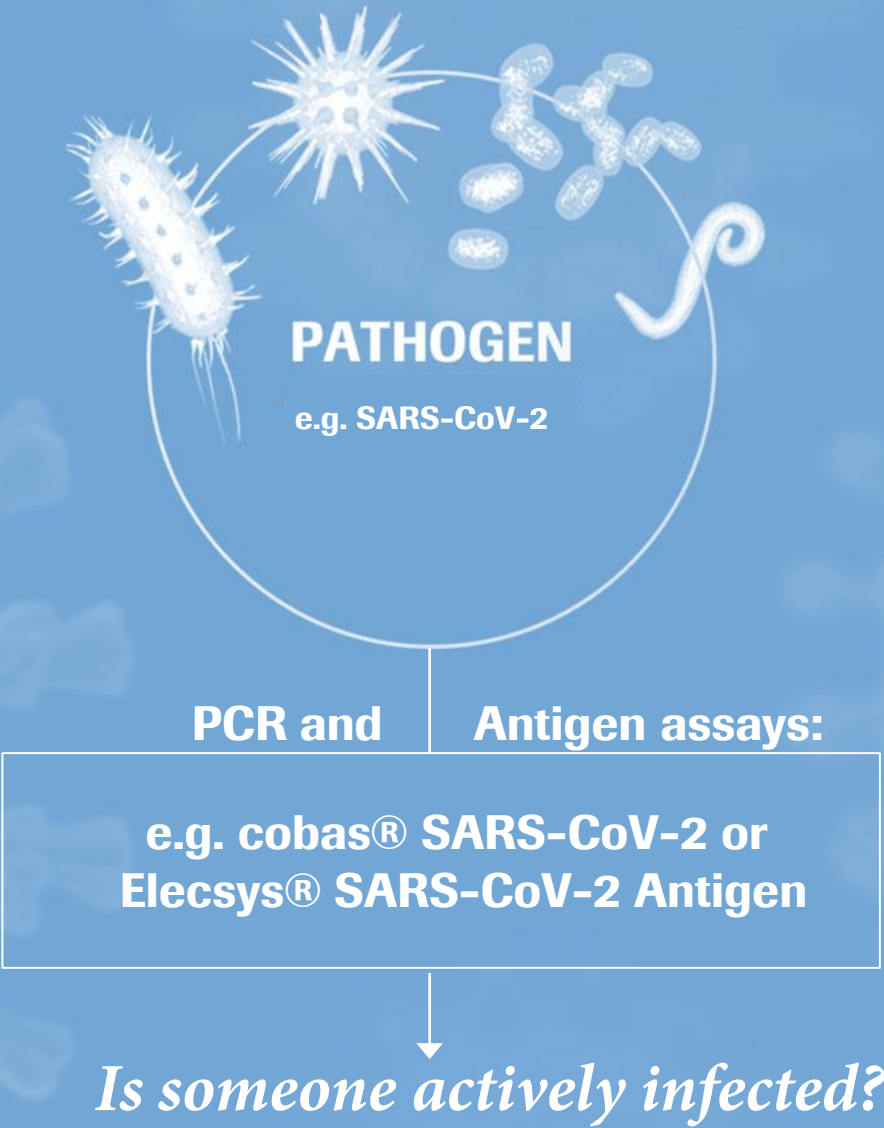
¹ GBD 2017 Causes of Death Collaborators. Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet*. 2018 Nov 10;392(10159):1736-1788. doi: 10.1016/S0140-6736(18)32203-7. Epub 2018 Nov 8; ² Sung S., Ferlay J., Siegel R., et al. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin*. 2021;0:1-41; ³ Bloom DE et al. National Bureau of Economic Research Working Paper 7757; ⁴ Prediction United Nations (March 9, 2020)

Pathogen, immunity and host belong together

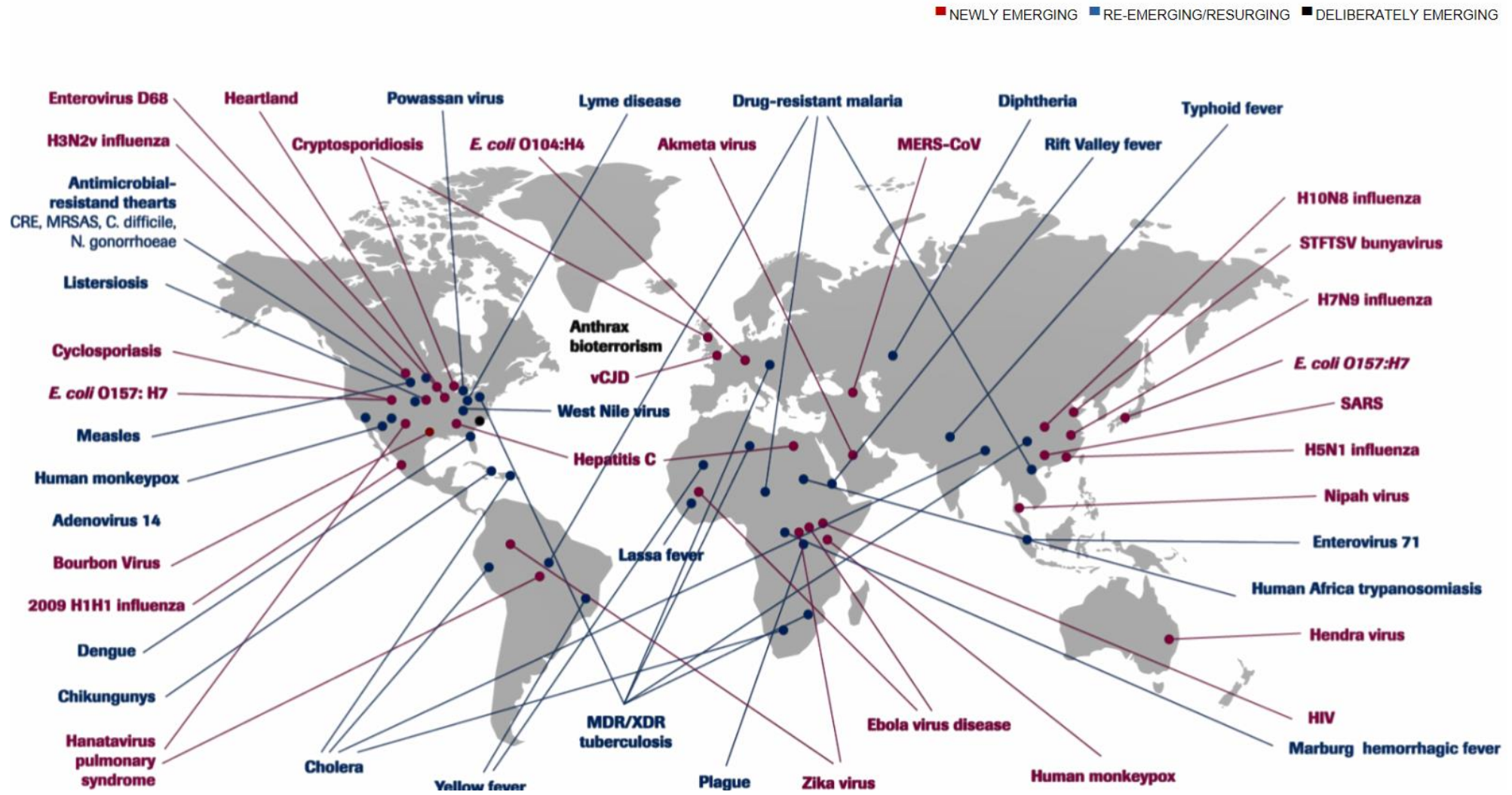
Developing comprehensive disease-based solutions for patients



What are the medical use cases across the patient journey ?



Global emerging and re-emerging infectious diseases



Roche infectious diseases pipeline

Holistic portfolio coverage is a key medical value

Viral Hepatitis + STDs		Pregnancy + Transplant	Respiratory	Vector Borne	Donor Screening	Vaccination Panel	Gastrointestinal	Antimicrobial Stewardship
HIV-1	CT/NG	CMV	Flu A/B/RSV	Zika IgG	Anti-HCV	Anti-HBs	cDiff	MTB-RIF/INH
HBV	TV/MG	HSV-1/2/VZV	MTB	Zika IgM	HBsAg	Rubella IgG	>3 more medical value solutions	>6 more medical value solutions
HCV	HPV	EBV	MAI	Dengue IgG	Anti-HBc	Anti-HAV		
HIV-1/2 Qual	HCV DUO	BKV	MPLX Respiratory	Dengue IgM	HIV combi PT	>6 more medical value solutions		
Anti-HAV	Anti-HEV IgG	CMV IgG	>5 more high medical value solutions	Dengue Ag	HIV Duo			
Anti-HAV IgM	Anti-HEV IgM	CMV IgM		Chik IgG	Syphilis			
HBsAg	Genital Ulcer Panel	CMV Avidity		Chik IgM	Chagas			
HBsAg confirmatory	Vaginal Discharge Panel	Toxo IgG		Lyme IgG	HTLV I/II			
HBsAg quant	Mycoplasma Panel	Toxo IgM		Lyme IgM	CMV IgG			
Anti-HBs	HBeAg quant	Toxo Avidity		>2 more medical value solutions	MPX			
Anti-HBc	Anti-HBc quant	EBV EBNA IgG			WNV			
Anti-HBc IgM	>10 more medical value solutions	EBV VCA IgG			DPX			
Anti-HBe		EBV IgM			HEV			
HBeAg		Adeno Quant			CHIKV/DENV			
Anti-HCV		HSV-1/2/VZV			Zika (US-IVD)			
HIV combi PT		>3 more medical value solutions			Babesia			
HIV DUO					Zika (CE-IVD)			
HIV confirmatory					>2 more medical value solutions			
HTLV I/II								
Syphilis								
RPR								
HSV-1 IgG								
HSV-2 IgG								

Sepsis

PCT
IL-6
IL-6 US neonatal & adult
New Early Sepsis Marker
Digital Decision Support

On market

In development

Considered

Roche infectious diseases pipeline

Systematically addressing areas of unmet medical needs



Tuberculosis

10m new cases p. a.
1.4m death p.a.¹



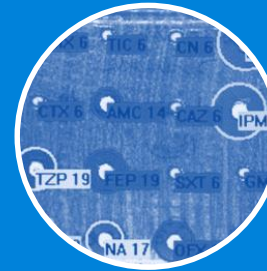
Sepsis

50m new cases p. a.
11m death p.a.²



Dengue Fever

400m new cases p. a.
4bn people at risk¹



Antimicrobial Resistance

1m death p.a. 2020
10m death p.a. in 2050³



Lyme Disease

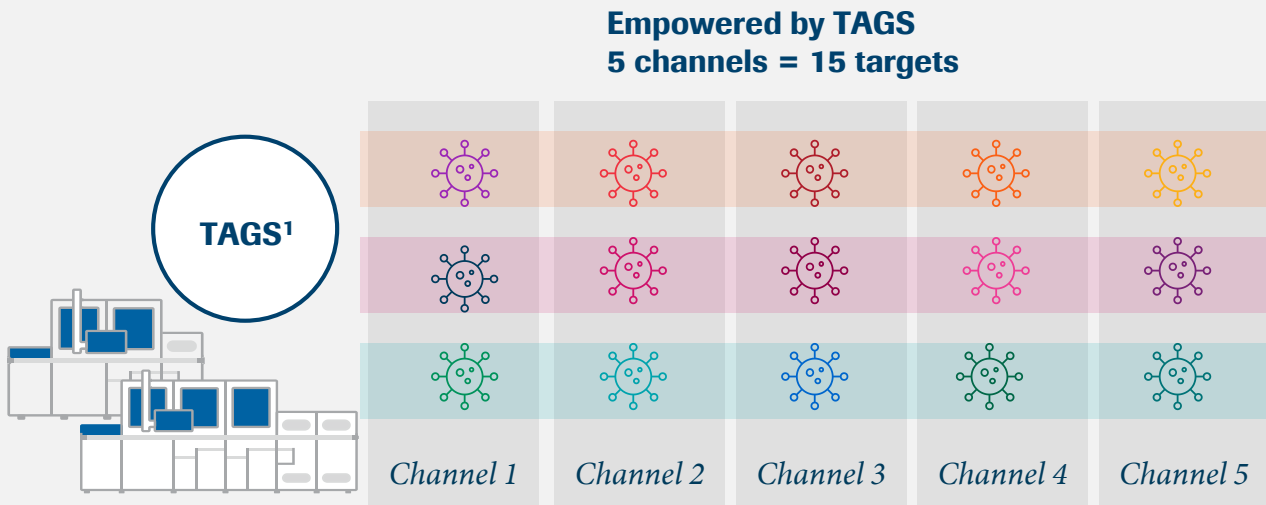
1.1m new cases p. a.
Rapidly increasing^{4,5}

Addressing >CHF 100bn total healthcare costs per year¹⁻⁴

¹ WHO 2020; ² Rudd KE, et al. Lancet. 2020; ³ Dadgostar P. Infect Drug Resist. 2019; ⁴ CDC 2020; ⁵ ECDC 2020.

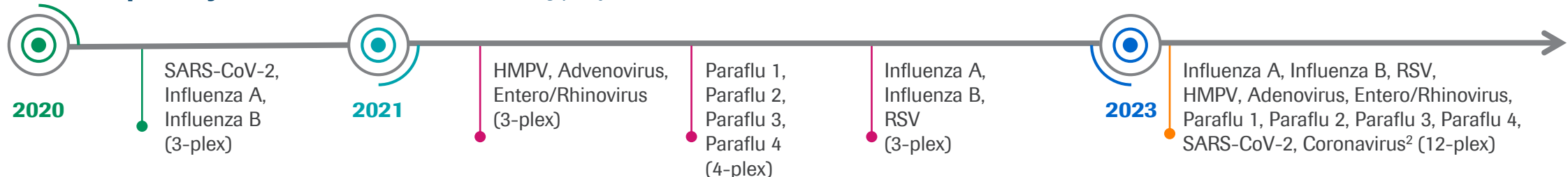
Molecular Diagnostics respiratory multiplex panel

Breaking the barriers of syndromic testing



- High unmet medical need:
differential diagnosis between viruses
- Cost-efficient approach
- Fully automated high throughput
- Utilizes the **cobas®** 6800/8800 install base

Respiratory Panels Timeline (launch timing per year is illustrative):



¹ TAGS: Temperature Activated Generation of Signal; ² Common cold coronaviruses including HKU1, OC43, NL63, 229E

“I share Alfred Nobel's conviction that war is the greatest of all human disasters. Infectious disease runs a good second.”

Peter C. Doherty, 1996 Nobel Prize Laureate in Physiology or Medicine



Roche Diagnostics Investor Day 2021

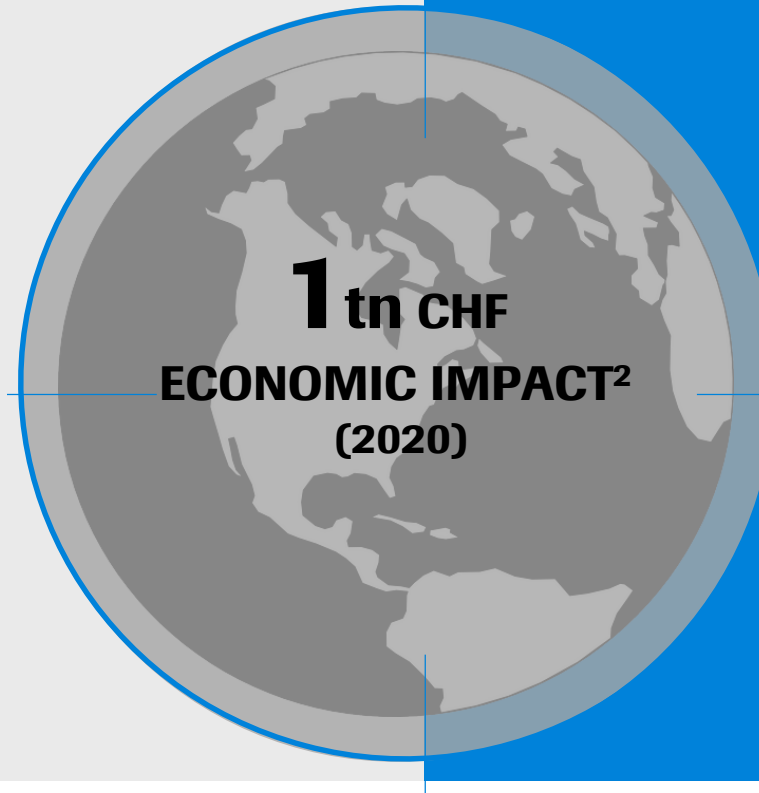
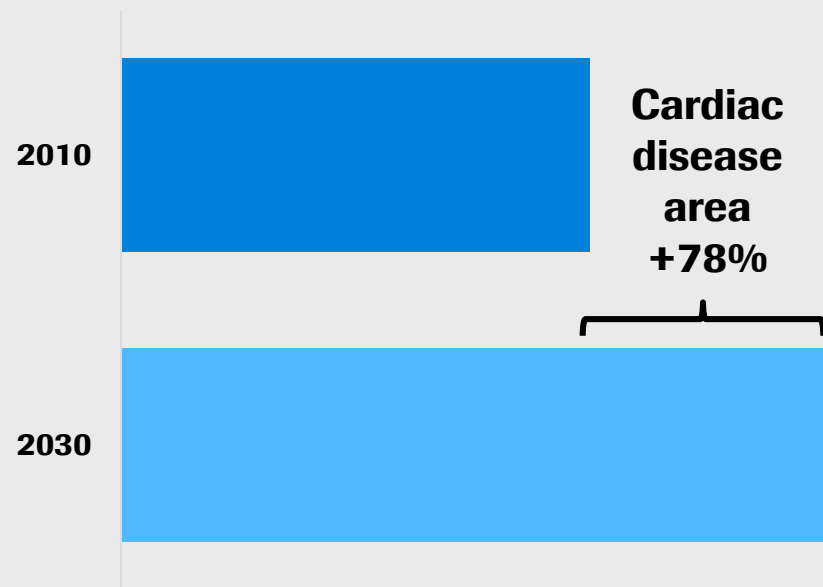
Cardiology

Andre Ziegler | Global Clinical Leader Cardiology

Cardiovascular disease is #1 killer in the world

Cause of 18 million deaths globally per year¹

Disease Burden Index



Cardiovascular disease major cost driver for healthcare systems⁵

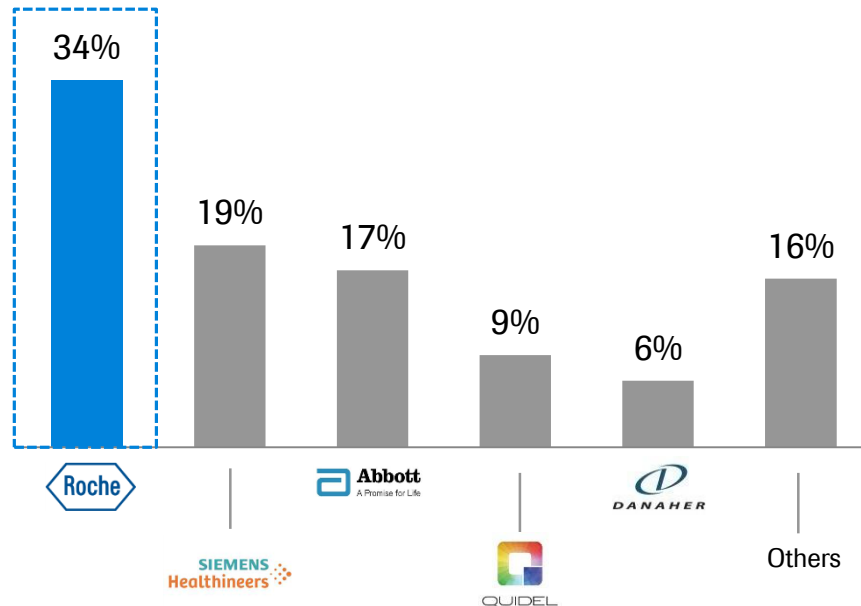
Prevalence (per million)

Coronary Artery Disease ³	197
Strokes ³	101
Heart Failure ⁴	64
AFib ³	60

Roche is an IVD market leader in cardiovascular diseases

Highest benefit class and evidence level in major cardiac guidelines

Core Lab cardiovascular market share in 2019¹



Clinical practice guidelines⁸



“Redefining the **gold standard** of myocardial infarction using Troponin T”⁴

- Diagnosis^{2,3}
- Risk prediction^{2,3}
- Early invasive strategy²



“NT-proBNP: The **gold standard** biomarker in heart failure”⁷

- Diagnosis^{5,6}
- Prognosis⁶

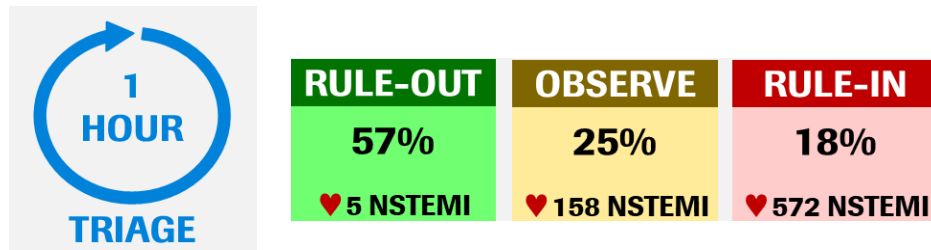
¹ Source – Roche Diagnostics with BBC; ² Roff M et al, Eur Heart J 2016; 37: 267; ³ Amsterdam EA et al., Circulation 2014;130:2354; ⁴ Ohman EM. Clin Chem 2017; 63: 429; ⁵ Ponikowski P et al., Eur Heart J 2016; 37:2129; ⁶ Yancy CW et al, Circulation. 2017;136:e137; ⁷ McKie PM et al, J Am Coll Cardiol 2016;68:2437; ⁸ American College of Cardiology / American Heart Association

Leading coronary artery disease

Setting new standards of care in diagnosing heart attacks

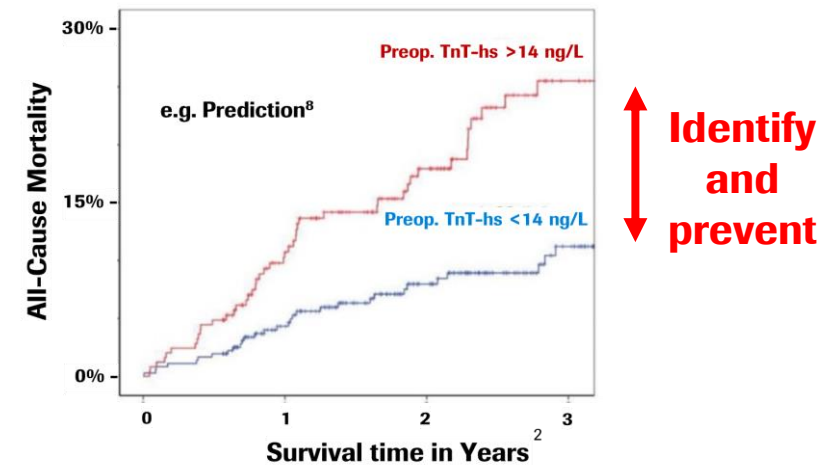
Elecsys® Troponin T-high sensitive (TnT-hs) test

1 hour decision algorithm



- Shortened hospital stay in suspected heart attack leading to reduced clinical costs^{1,2}
- Algorithm confirmed in interventional studies and included in treatment guidelines^{3,4,5,6}
- 100 million chest pain patients treated globally

New data on cardiac risk in non-cardiac surgery



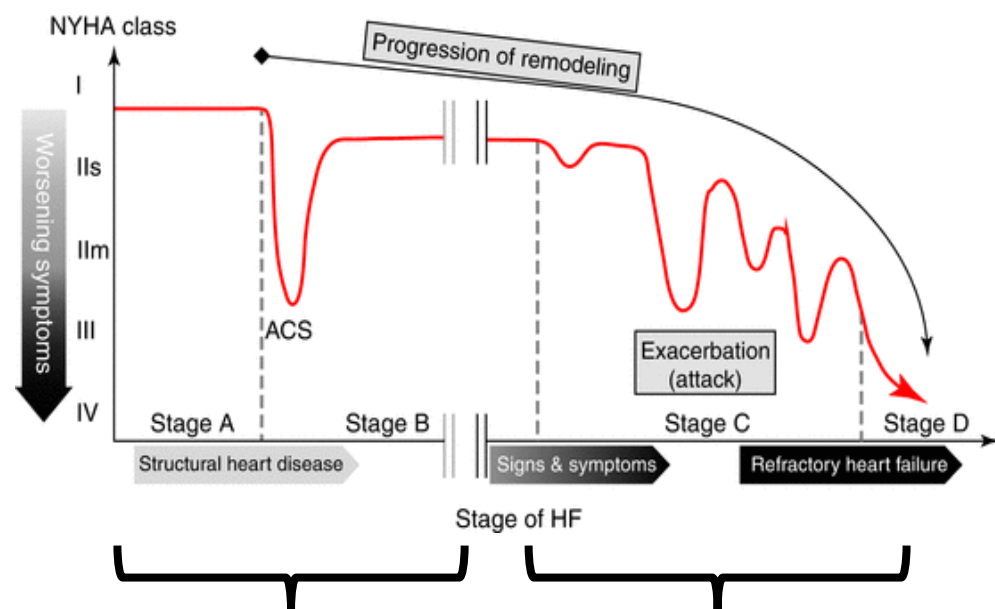
- TnT-hs test able to predict heart attack risk and mortality in non-cardiac surgeries
- > 80% of myocardial injuries after non-cardiac surgery are clinically asymptomatic
- 300 million non-cardiac surgeries globally^{6,7}

¹ Twerenbold, R et al. J Am Coll Cardiol. 2018, 72: 620; ² Ambavane A et al., PLoS One. 2017; 12(11): e0187662; ³ Chew D et al, Circulation. 2019;140:1543; ⁴ Stoyanov KM et al, Eur Heart J Acute Cardiovasc Care. 2020, 9:39; ⁵ Puelacher C et al. Circulation. 2018, 137:1221; ⁶ Devereaux PJ et al. JAMA 2017, 317:1642; ⁷ Nagele P et al, Am Heart J. 2013, 166: 325

Transforming diagnostics in heart failure

Type-2 diabetes: Identifying heart failure early to improve outcome

Stages of heart failure¹

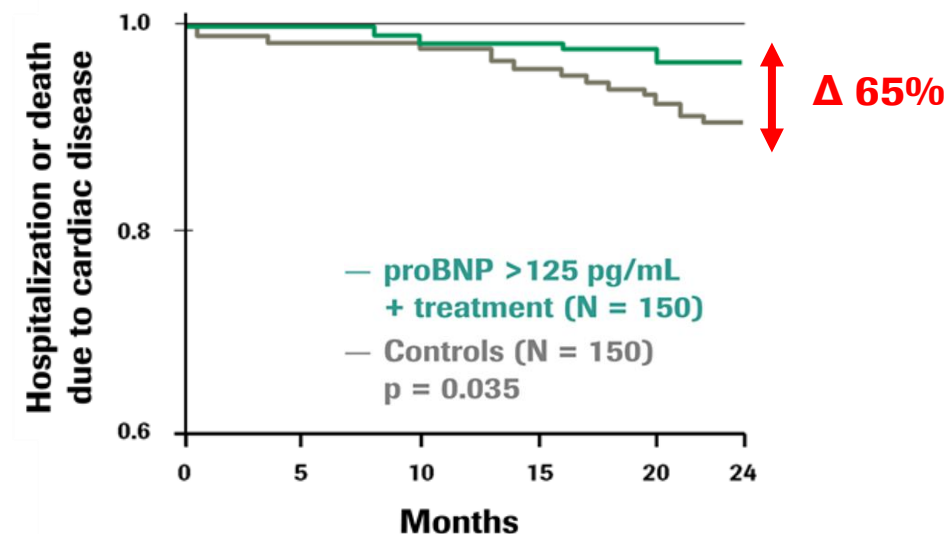


Tomorrow's focus:
463 million
type-2 diabetes patients²

Today's focus:
64 million
patients³

New NT-proBNP intended use (IU) to be launched in 2021

PONTIAC-I study⁴



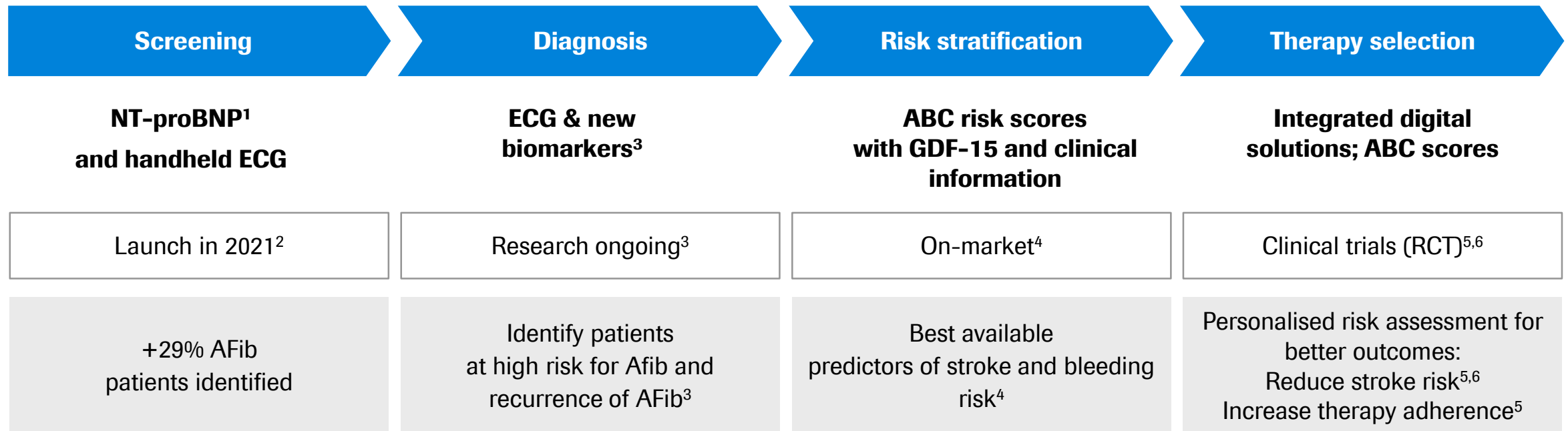
- Identify type-2 diabetes patients with high cardiovascular risk to start effective drug treatment

¹ Kato M. The Concept of Heart Failure. 2018 (doi.org/10.1007/978-4-431-56065-4_1); ² Saeedi P et al., Diabetes Res Clin Pract 2019; 157: 107843; ³ Groenewegen A et al, Eur J Heart Failure 2020; 22: 1342;

⁴ Huelsmann M. et al. JACC. 2013, 62:1365, confirmatory clinical trials (RCTs) running both in Europe (NCT02817360, PONTIAC-II) and Asia (NCT04286399, ADOPT).

Improving disease management to reduce strokes

Innovation on-market and pipeline for atrial fibrillation



Cardiovascular disease solutions

New solutions to impact medical practice



Coronary artery disease



Launch new intended uses in 2021

- TnT-hs in non-cardiac surgeries. Diagnosis of peri-operative myocardial infarction (MI)
- TnT-hs in asymptomatic population. Long-term risk stratification of cardiovascular events

New patient population

300 million
surgeries^{1,2}
457 million
at age 70+

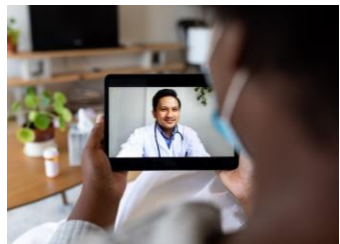


Heart failure



- Heart Failure prevention in diabetes. Identify patients at high CV risk and start protective therapy

463 million
with diabetes³



Stroke prevention in atrial fibrillation



- NT-proBNP + ECG for atrial fibrillation screening in the elderly

457 million
at age 70+

Roche Diagnostics Investor Day 2021

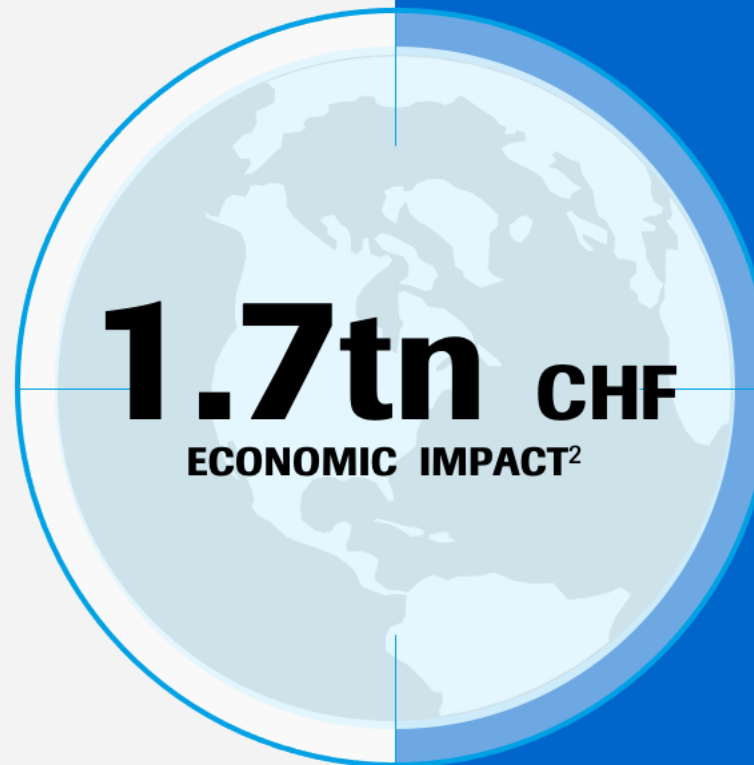
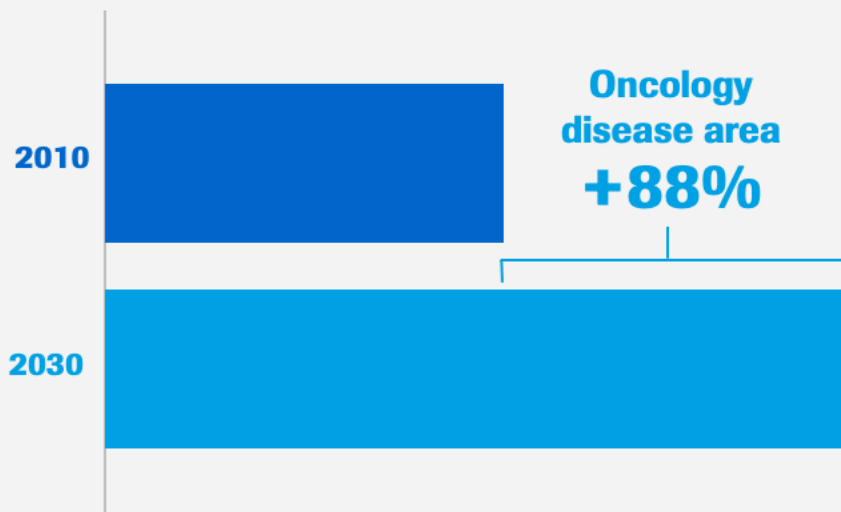
Oncology

Jill German | Global Head of Pathology Lab

Global cancer burden projected to increase

Significant impact to both human lives and world economy

Disease Burden Index¹



Global cancer impact 2020³

19.3 million
new cancer incidences

10 million
cancer mortalities

It is estimated that **1 in 10 women** and **1 in 8 men** will be diagnosed with cancer during their lifetime

The field of oncology is evolving and increasing in complexity

Driving the need for novel diagnostic solutions



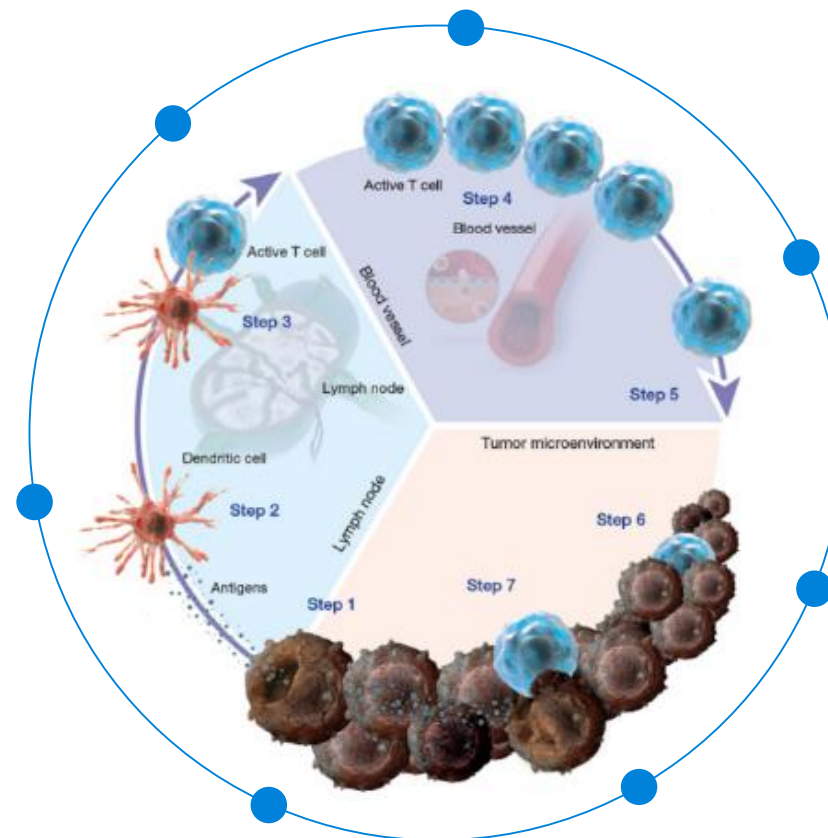
Oncology market is rapidly evolving

New therapies and therapy combinations emerging to prolong patients' lives



5,000+ clinical trials

are now exploring the utility of cancer immunotherapy



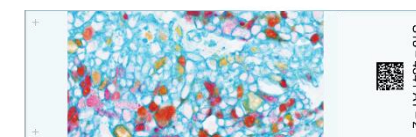
Growing understanding of the biological complexity of immune oncology



New diagnostics and digital tools are required

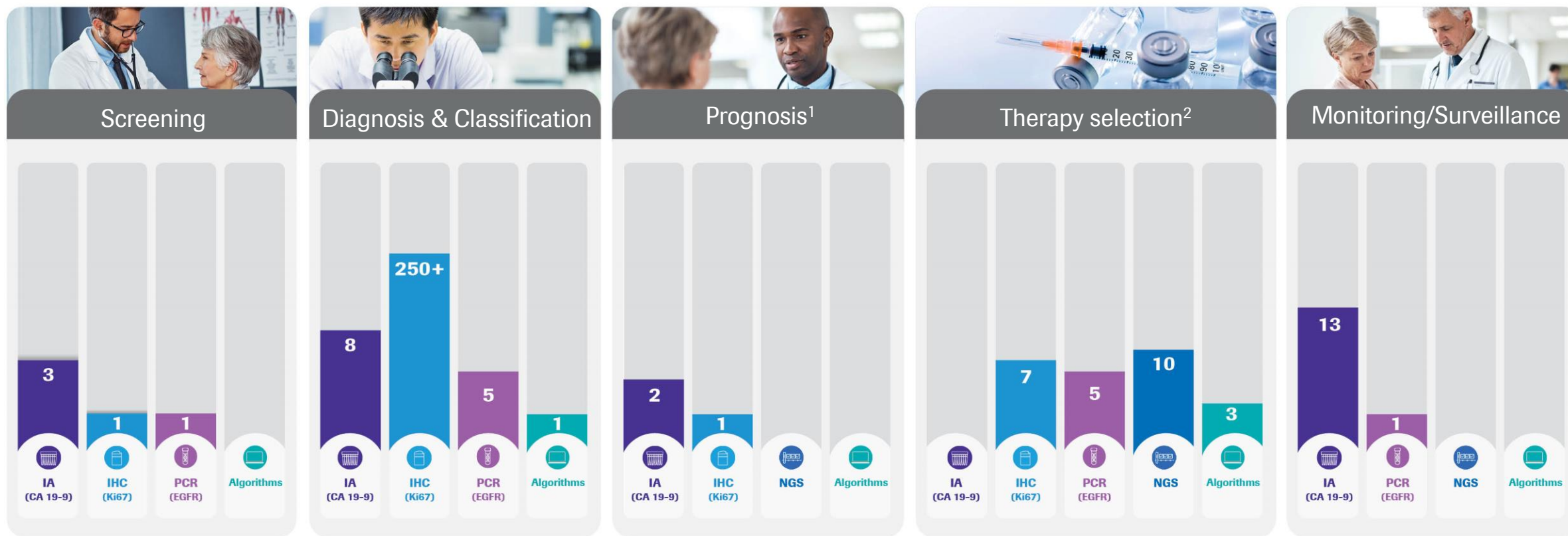
Innovation is needed to identify optimal therapies for individual patients

- Multi-modal diagnostics
- Clinical decision support



Supporting patient journeys with our oncology portfolio

Sales of oncology reagents surpassing CHF 1.8 bn in 2020



¹ Predicting the likely or expected development of a disease ² On-label CDx indications



Decision support: NAVIFY Mutation Profiler, NAVIFY Tumor Board, NAVIFY guidelines



Immunoassay (IA)



Immunohistochemistry (IHC)



Next Gen Sequencing (NGS)



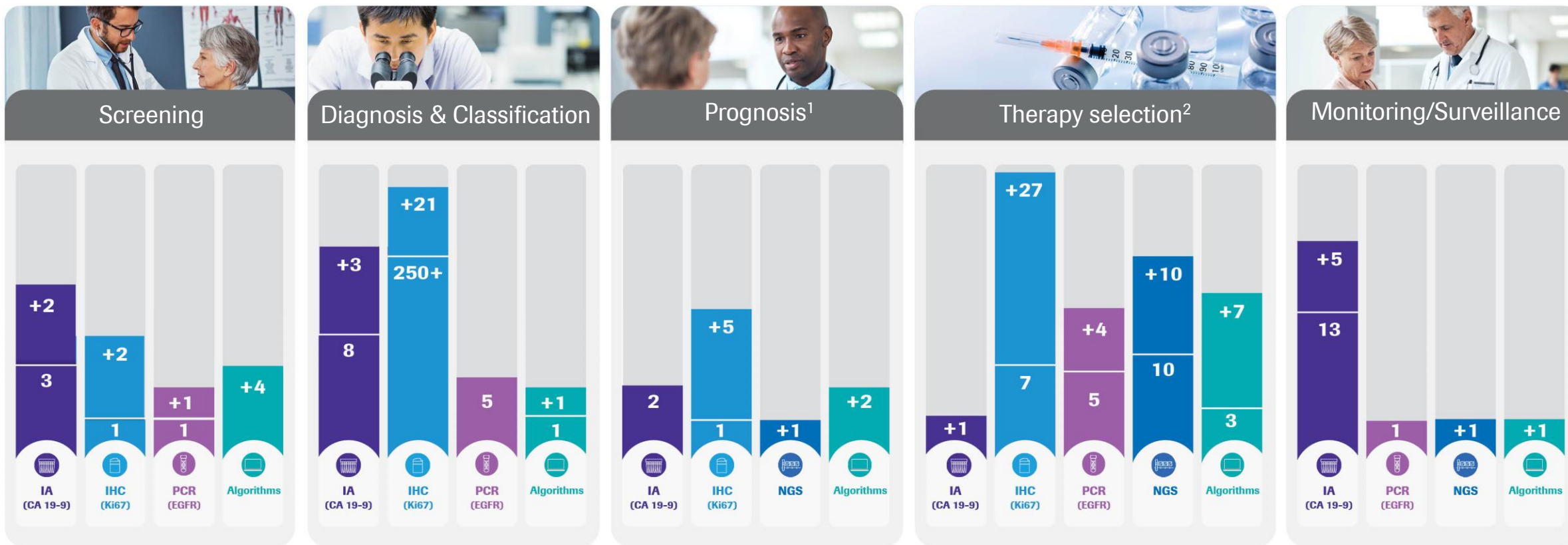
Polymerase Chain Reaction (PCR)



Algorithms

Supporting patient journeys with our oncology pipeline

Pharma partner of choice, driving personalised healthcare



Decision support: NAVIFY Mutation Profiler, NAVIFY Tumor Board, NAVIFY guidelines
 + Patient Journey, Guidelines adherence tracking, quality reporting, therapy matching



Immunoassay (IA)



Immunohistochemistry (IHC)



Next Gen Sequencing (NGS)



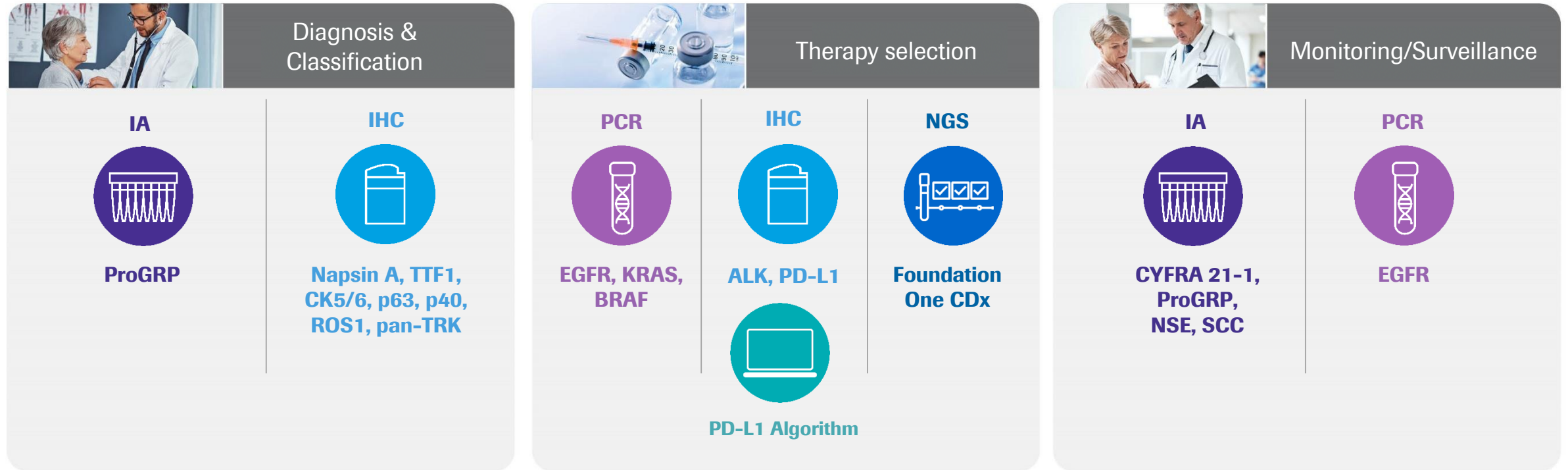
Polymerase Chain Reaction (PCR)



Algorithms

Example: Our comprehensive solution for lung cancer

Innovating clinical decision making and improving patient care



Decision Support: NAVIFY Tumor Board, NAVIFY Mutation Profiler

Integrated oncology decision support

AI-enabled digital solutions for informed, efficient patient management

NAVIFY® Digital Pathology PD-L1 Algorithm

Interpretation
of biomarker

NAVIFY® Mutation Profiler

Therapy options
& clinical trials

NAVIFY® Tumor Board

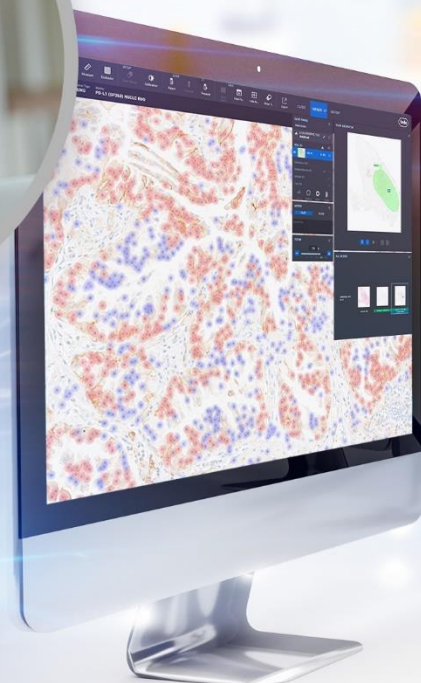
Radiology, pathology
& clinical data together

Flatiron and Foundation Medicine

Access to clinico-
genomics database



**Quick, accurate
answers for
patients**



**Confident decisions
& standardized care**



Q&A

Roche Diagnostics Investor Day 2021

Closing

Thomas Schinecker | CEO Diagnostics

Setting up Diagnostics for a sustainable and successful future

Point of departure

Healthcare is shifting to reward improved patient outcomes at reduced cost of care

Roche as a market leader is uniquely positioned to address the evolving healthcare needs

Strategy

Expand the business model from diagnostics solutions to healthcare decision support and disease management to improve patient outcomes

Invest in innovation, access and partnering

Implications

The new Diagnostics strategy will contribute to the Roche strategic ambitions

Shift investments and realign the operating model to implement the strategy

Diagnostics investor day summary



Grow our market share

- Larger installed base and new systems launches fueling growth
- Differentiation through medical value
- Broad and innovative testing pipeline portfolio



Invest in strategic priorities

- Increase productivity by simplifying the organization
- Reallocate investments to drive innovations

Doing now what patients need next