

MAPPING A DIGITAL FUTURE FOR KIDNEY CARE

Expert call | March 29, 2021 Franklin W. Maddux, MD FACP - CMO





Safe harbor statement: This presentation includes certain forward-looking statements within the meaning of Section 27A of the U.S. Securities Act of 1933, as amended, and Section 21E of the U.S. Securities Act of 1934, as amended. Forward-looking statements are inherently subject to risks and uncertainties, many of which cannot be predicted with accuracy or might not even be anticipated. The Company has based these forward-looking statements on current estimates and assumptions which we believe are reasonable and which are made to the best of our knowledge. Actual results could differ materially from those included in the forward-looking statements due to various risk factors and uncertainties, including changes in business, economic or competitive conditions, changes in reimbursement, regulatory compliance issues, regulatory reforms, foreign exchange rate fluctuations, uncertainties in litigation or investigative proceedings, cyber security issues and the availability of financing. Given these uncertainties, readers should not put undue reliance on any forward-looking statements. These and other risks and uncertainties are discussed in detail in Fresenius Medical Care AG & Co. KGaA's (FMC AG & Co. KGaA) Annual Report on Form 20-F under the heading "Forward-Looking Statements" and under the headings in that report referred to therein, and in FMC AG & Co. KGaA's other reports filed with the Securities and Exchange Commission (SEC) and the Frankfurt Stock Exchange (Frankfurter Wertpapierbörse).

Forward-looking statements represent estimates and assumptions only as of the date that they were made. The information contained in this presentation is subject to change without notice and the company does not undertake any duty to update the forward-looking statements, and the estimates and assumptions associated with them, except to the extent required by applicable law and regulations.

If not mentioned differently the term net income after minorities refers to the net income attributable to the shareholders of Fresenius Medical Care AG Co. KGaA. The term EMEA refers to the region Europe, Middle East and Africa. Amounts are in Euro if not mentioned otherwise.



■ DIGITALIZATION ACROSS THE FULL STRATEGIC VISION

FRESENTUS MEDICAL CARE

STRATEGIC VISION

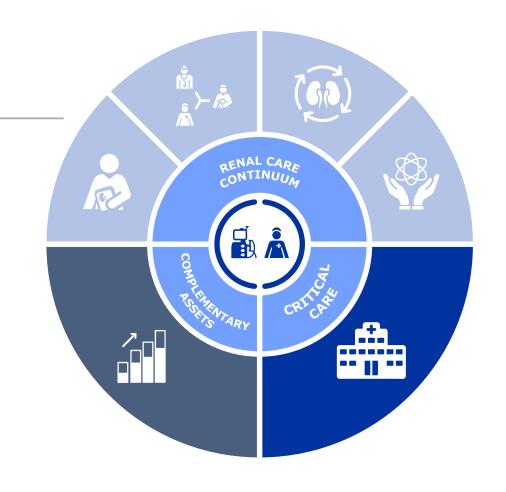
In 2020 Fresenius Medical Care's Management Board outlined our company's strategic vision built around three core areas:

The renal care continuum

Critical care and

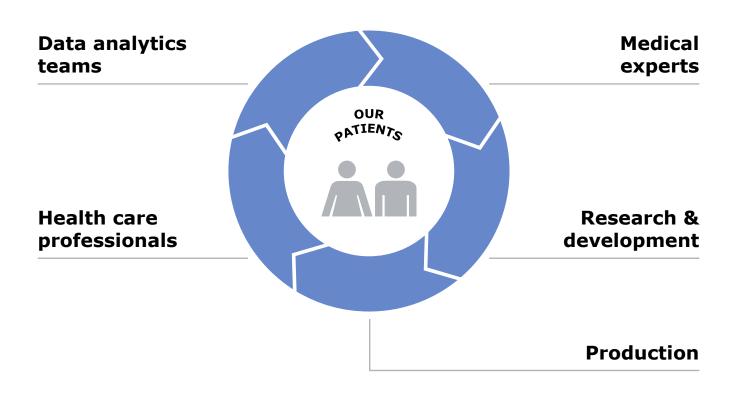
Complementary assets.

The organization of the Global Medical Office allows us to comprehensively consider scientific evidence and innovations in order to advance clinical practice on a worldwide basis.



■ HOW TO ENABLE OUR VISION ON DATA ASSETS?

AS A FULL VERTICAL INTEGRATED COMPANY...





■ HOW TO ENABLE OUR VISION ON DATA ASSETS?

...FRESENIUS MEDICAL CARE IS IN A UNIQUE POSTION OF LEVERAGEING ITS VARIOUS DATA POOLS TO PROVIDE INDIVIDUALIZED AND BEST IN CLASS THERAPIES.



Production and service data

Intelligent production and services



Machine and device data

Smart machines and clinical workflows



Medical and therapy data

Individualized and adapted therapies





Convenience Efficiency





Outcome/Efficiency

- Predictive maintenance
- Intelligent production capacity planning
- Automated testing environment

- Automated alarm management
- Intelligent Ultra Filtration

- Reduction of dropout rates in Home patients
- Individualized comorbidity management
- Transitional care by data and diagnostics



■ IN HEALTH CARE, DATA HAS ALSO GROWN EXPONENTIALLY

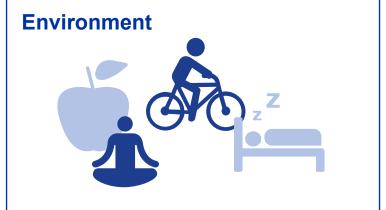
HOW DO WE MAKE SENSE OF IT ALL?

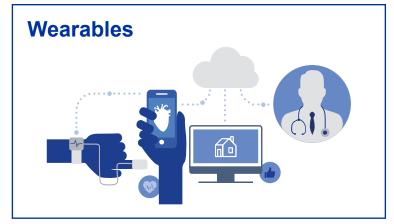




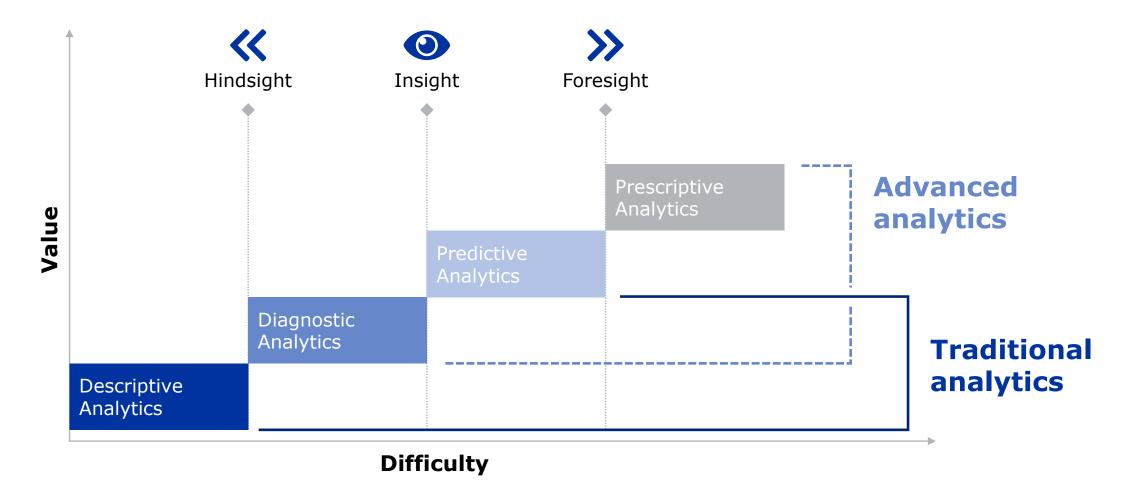








■ THE EVOLUTION OF DIGITAL DATA UTILITY





■ DIGITAL SKILLSETS AND CAPABILITIES NEEDED



Domain Experts

(e.g., physician)
define the goal, help
other team members
to grasp the relevance
of real-life questions.



Data Scientists

use analytical and technical capabilities to extract meaningful insights from data.



Data Engineers

ensure uninterrupted flow of data between servers and applications. They are responsible for data architecture.



Statisticians

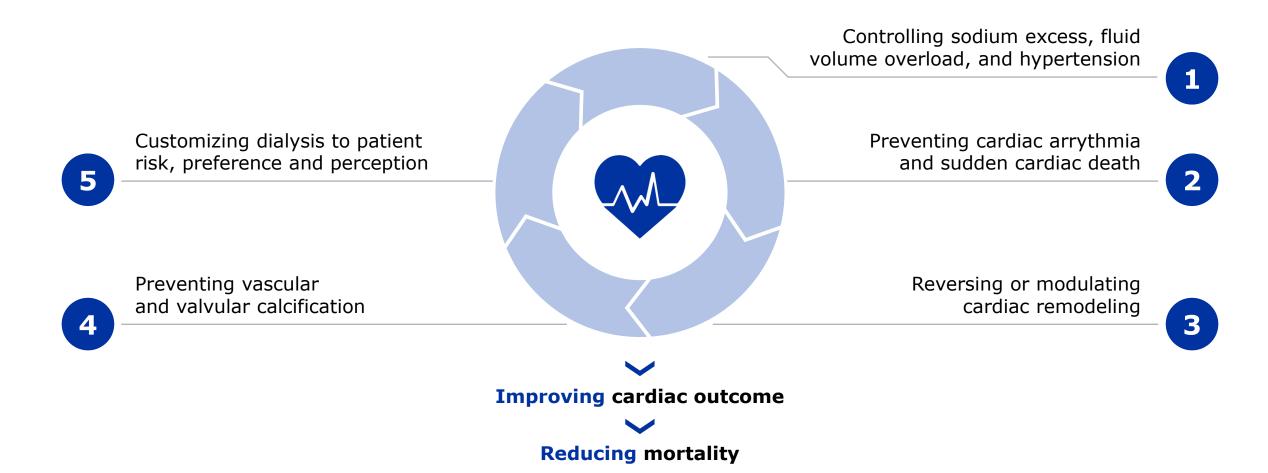
use theoretical expertise in statistics and apply them to real life problems.



Mathematicians

use mathematical modeling and computational methods to solve practical problems.

■ CARDIOVASCULAR PROTECTION FOR KIDNEY PATIENTS





■ BROADEST DATA SET IN THE WORLD ON ADVANCED KIDNEY DISEASE

GLOBAL NUMBERS



2,138,564

Patients



567,797,521

HD treatments



1,972,926,596

Labs



36,860,636

Comorbidities



1,548,575,115

In-center medications



2,972,171,527

Home medications

OUR CONNECTED HEALTH MACHINE





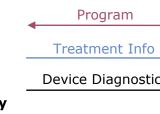








Reciprocity Gateway









FRESENIUS MEDICAL CARE

KINEXUS Operations





Device Diagnostics

Patient data

Fresenius Dialysis machine supported by peripherals and Home Patient App collects patient data

Kinexus Gateway

Data is securely transferred via Bluetooth, Wi-Fi or wired

Kinexus Cloud

In secured cloud data is stored and analyzed with medical algorithms

Clinical Care

Have access to analyzed patient data on their computer or mobile device



■ GENOMICS | OVERVIEW





Vision

Catalyze increased innovation and investment in renal research



Goal

Build world largest renal registry; a curated database of clinical and genomic data



Strategy

Leverage existing FME's global footprint, vertical integration and diverse patient population

■ GENOMICS | VALUE CREATION

APPLICATION OF GENOMICS AND PRECISION MEDICINE ASSET AND CAPABILITY BY FMC PARTNERS AND PROVIDERS



Academic research

- Causes of kidney disease(s)
- Early diagnosis and monitoring biomarkers
- CKD and ESRD risk factors



Pharmaceutical R&D

- New therapeutic drug targets
- Translatable Kidney disease models
- Targeted clinical trials with reduced cost and time



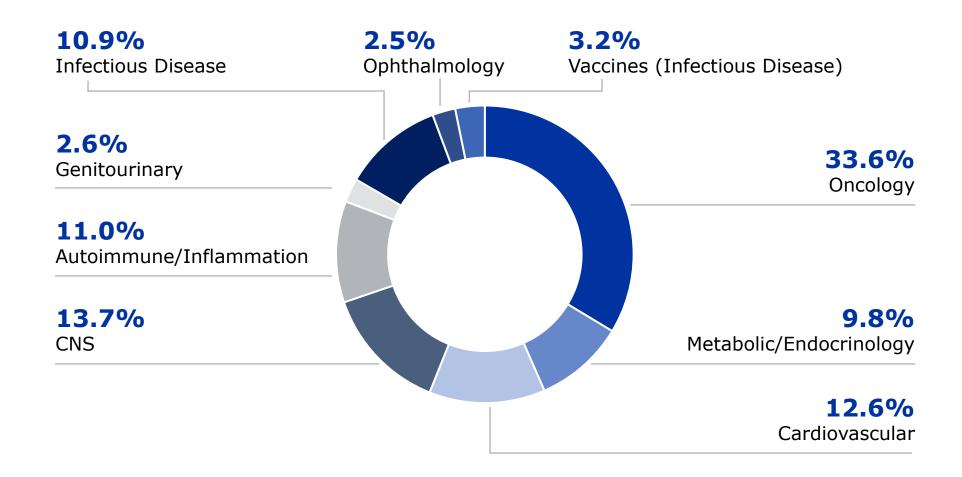
Patient care

- Optimized therapies for targeted patient groups
- Improving transplant outcomes with more precise tissue typing/ post-transplant care
- Refined risk models and target interventions





CLINICAL TRIALS BY MEDICAL DISCIPLINE





■ KEY AREAS OF APPLIED ADVANCED ANALYTICS EFFORTS



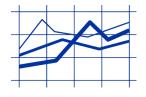
Event prediction



Treatment Aid



Condition Diagnosis



Mathematical modeling and algorithms





Delivery of personalized care and optimization of multiple processes within the business

■ HOW DOES ARTIFICIAL INTELLIGENCE FIT INTO A DIGITALIZATION PLAN?



Artificial intelligence

A program that enables computers to mimic human behavior.



Machine learning

Subset of AI that uses statistical methods to build programs and whose performance improves when exposed to large amounts of data.



Deep learning

Subset of machine learning in which multilayered neural networks learn from vast amounts of data.

CAN WE CREATE A VIRTUAL CLINICAL TRIAL?

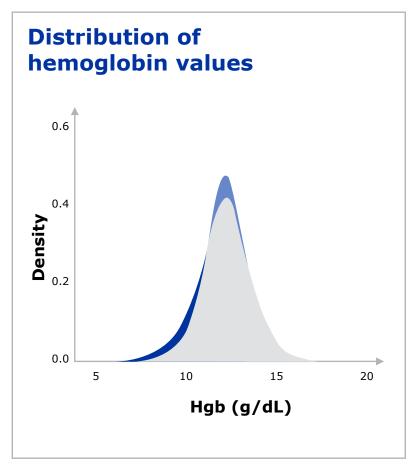
Can we use mathematical principles and create virtual "clinical" trials?

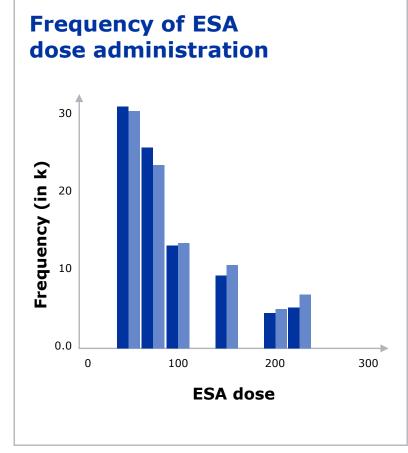
A Virtual Clinical Trial enables testing of multiple interventions in a random large sample of patients

Result 3 Result 1 We sail 1 We

■ SIMULATION OF ESA RESPONSE IN INDIVIDUAL PATIENTS

A standard of care anemia treatment protocol was tested in ~6,700 Avatars for one virtual year and compared to one year of data from ~6,700 anemia patients treated with the same protocol

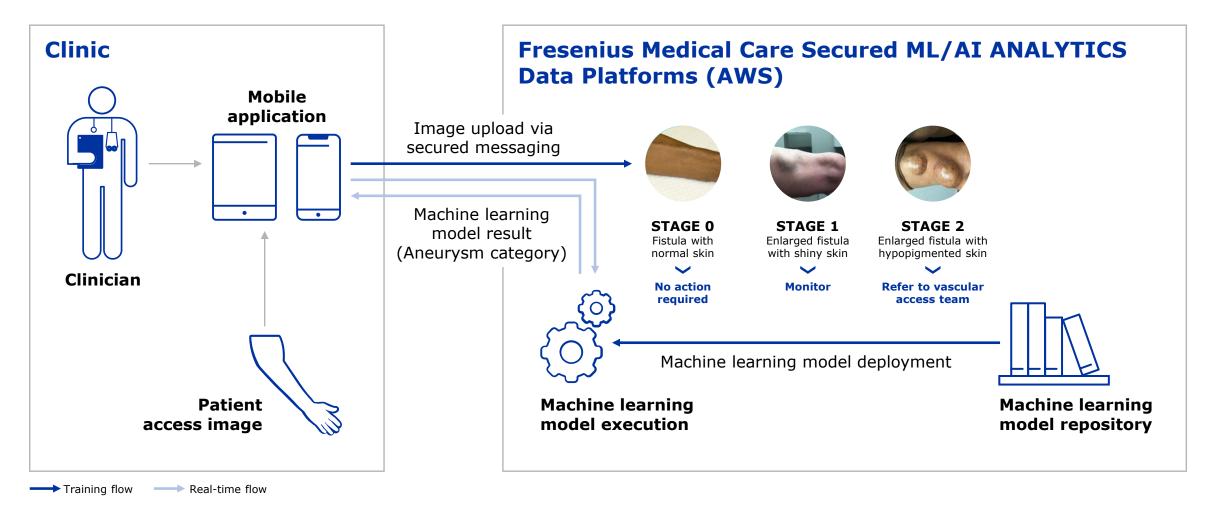




Fuertinger et al., CPT Pharmacometr. Syst. Pharmacol. (2018) | Clinical data VIAT 3.0

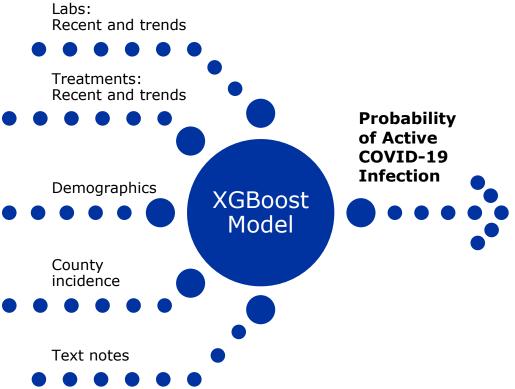


■ MAKING THE DIGITAL DATA APPLY TO CLINICAL CARE



■ A MODEL FOR COVID PREDICTION RISK

INPUTS AND OUTPUT



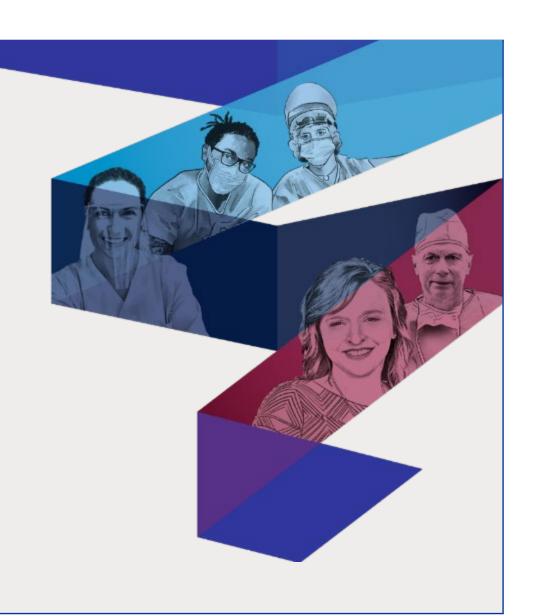
Prediction	Reason 1	Reason 2	Reason 3
0.94	Monocytes: Change from previous month = 6.65	IDWG: Change from previous month = -1.82	Albumin: 2-week average = 2.9
0.92	County incidence: 3-day span = 0.001	WBC count: Change from previous month = -3.26	IDWG: Change from previous month = -2.054
0.91	Monocytes: Change from previous month = 3.375	County incidence: 3-day span = 0.001	County incidence: 3-week span = 0.001
0.91	County incidence: 3-day span = 0.002	Monocytes: Change from previous month = 4.033	County incidence: 3-week span = 0.001
0.91	Albumin: 2-week average = 2.6	IDWG: Change from previous month = -4.377	Post-HD Temperature: Change from previous month = 1.108 ¹

1 ~0.6 C





Your Questions Are Welcome!



FINANCIAL CALENDAR 2021

REPORTING DATES & AGM

May 6	Q1 2021	Earnings Release	and Conference Call

May 20 Annual General Meeting 2021 (Virtual)

July 30 Q2 2021 Earnings Release and Conference Call

November 2 Q3 2021 Earnings Release and Conference Call

CONFERENCES & MEET THE MANAGMENT

May 18 RBC Capital Markets Global Healthcare Conference

May 26-27 UBS Best of Europe One-on-One Virtual Conference



Please note that dates and/or participation might be subject to change



■ CONTACTS

