



Panel #3

VALENCIA
March 2026

Theme

**Success and Warnings: Medical Decisions
Using AI-Advanced Tools Under Scrutiny**

InfoSys 2026 & InfoWare 2026



Speakers

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Moderator

Prof. Dr. Dirceu Cavendish, Kyushu Institute of
Technology, Japan

Panelists

Prof. Dr. Michael Massoth, Hochschule Darmstadt - University of
Applied Sciences, Germany

Meghan Conroy, CEO & Founder, CaptureProof, USA

Dr. Elena Mancuso, Engineering Ingegneria Informatica SpA, Italy



Medical Devices: biosensors

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Biomarkers+

- Snapshot Diagnosis
- Illnesses' treatment monitoring

Comp. Metabolic Panel (14)

Test	Current Result and Flag		Previous Result and Date		Units	Reference Interval
▲ Glucose ⁰³	107	High	95	02/25/2025	mg/dL	70-99
BUN ⁰³	15		19	02/25/2025	mg/dL	8-27
▼ Creatinine ⁰³	0.72	Low	0.73	02/25/2025	mg/dL	0.76-1.27
eGFR	105		104	02/25/2025	mL/min/1.73	>59
BUN/Creatinine Ratio	21		26	02/25/2025		10-24
Sodium ⁰³	138		138	02/25/2025	mmol/L	134-144
Potassium ⁰³	4.1		4.3	02/25/2025	mmol/L	3.5-5.2
Chloride ⁰³	103		102	02/25/2025	mmol/L	96-106
Carbon Dioxide, Total ⁰³	21		25	02/25/2025	mmol/L	20-29
Calcium ⁰³	9.1		9.0	02/25/2025	mg/dL	8.6-10.2
Protein, Total ⁰³	6.9		7.0	02/25/2025	g/dL	6.0-8.5
Albumin ⁰³	4.3		4.2	02/25/2025	g/dL	3.8-4.9
Globulin, Total	2.6		2.8	02/25/2025	g/dL	1.5-4.5
Bilirubin, Total ⁰³	0.8		0.9	02/25/2025	mg/dL	0.0-1.2
Alkaline Phosphatase ⁰³	84		76	02/25/2025	IU/L	44-121
▲ AST (SGOT) ⁰³	55	High	66	04/29/2025	IU/L	0-40

+ Measurable indicators of biological state/condition



Efficient Data Driven Healthcare

Biosensors

Oximeter

- Measures: Lungs Oxygen Saturation Level; heart rate
- Abnormalities: Pneumonia; Blood Clots; Covid-19.

Continuous Glucose Monitors

- Measures: Glucose levels in interstitial fluid (skin)
- Abnormalities: Diabetes; Obesity; Insulinomia

Cholesterol Monitors (smart contact lenses)

- Measures: Cholesterol levels in tear fluid
- Abnormalities: Hyperlipidemia; Cardiovascular diseases

Electronic tattoos (graphene)

- Measures: heart rate; blood pressure;
- Abnormalities: Cardiovascular diseases

Activity Auxiliary Data (smatwatch/fitbit)

- Measures: steps data; activity classifiers (data context); sleep data;
- Biosensor data correlation: Heart rate; Glucose levels;

* Non medical devices



AI/ML Successes

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Image Processing illness detection

- Diabetic Retinopathy: Eye image processing for early detection
- Lung cancer: CT scan image processing for early lung cancer detection

Training Models in bioengineering

- Drug discovery: protein 3D structure prediction
- Vaccines design: new enzymes design for specific purposes



AI/ML Medical Workflows

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Workflows

- AI-ML as aiding tools
- Supervised workflows (MD-SME verification of outcomes)
- Explainable AI

AI/ML based Decision Making

- Claiming **safety and efficiency** of AI/ML based solutions



Panelist Position

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- **Technical Manager, PhD in Mechanical Engineering** with over a decade of rich and diversified experience in applied research & project management for the healthcare domain
- Engineering Ingegneria Informatica SpA, **Digital Transformation Company**, leader in Italy and expanding its global footprint, with ~ **14k associates and >80 offices** spread across Europe and worldwide.
- **AI&Data R&I** division comprising >100 researchers and data scientists, the Group continues to invest in (inter)national R&D projects while exploring groundbreaking technologies and developing new business solutions.
 - *Health System Optimisation*
 - *AI-enabled Clinical Decision Support System*
 - *Precision Medicine and Genomics*
 - *Patient Empowerment and Assistive Robotics*



Elena Mancuso
Engineering Ingegneria
Informatica SpA,
ITALY



Panelist Position

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The goal is no longer whether AI can assist medical decisions, rather how we design systems that remain accountable, interpretable, and clinically validated throughout their entire lifecycle



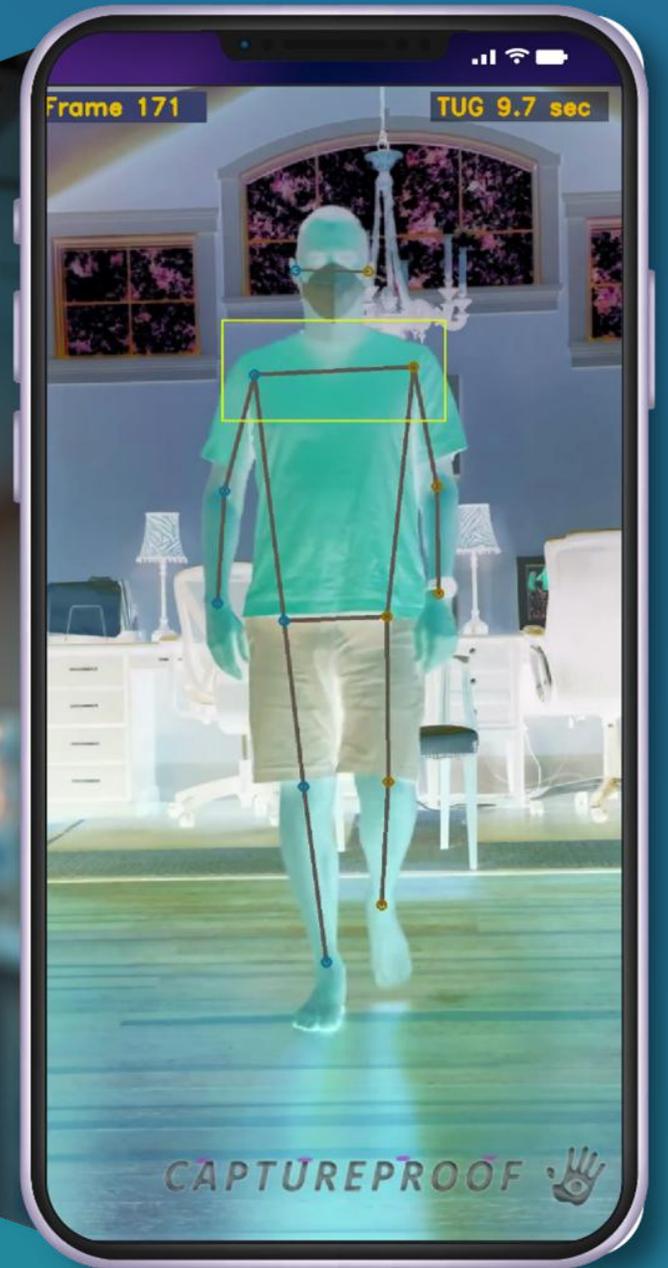
Elena Mancuso
Engineering Ingegneria
Informatica SpA,
ITALY

- ✓ Reduction of cognitive and administrative burden
- ✓ Consistency in complex decision environments
- ✓ Earlier detection and improved diagnostic support



- ⚠ Automation bias and over-trust
- ⚠ Hidden inequity in training data
- ⚠ Limited explainability in high-impact decisions

CAPTURE PROOF





Meghan Conroy

CEO & Founder, CaptureProof

About

- **Founded CaptureProof to modernize medical documentation using structured photo + video capture**
- **Patented protocol-driven visual workflows**
- **Focus: computer vision “visual endpoints” for objective mobility, balance, and motor function tracking**
- **Example: ALS research uses standardized video tasks (e.g., TUG, 5x Sit-to-Stand, facial metrics) to detect change beyond traditional scales**
- **Background: early work on home video for neurological assessment (AAN Oral Poster, 2013)**
- **Also founder: brilliantHush + Unicorn Cashmere**
- **Award-winning photographer (Saatchi Award, “I am Silent....”)**



Turn photos + video into structured clinical data (HIPAA-secure)

- HIPAA-compliant, asynchronous photo/video sharing + case-based communication
- “Protocol capture” on any smartphone: Smart Medical Camera™ + MediaRx guidance
- • Smart Compare Carousel™ to track change over time (side-by-side)
- • Computer vision / ML converts video into objective movement + function metrics (“visual endpoints”)
- • Built for clinic + home: remote monitoring, follow-ups, and eClinical Outcomes (eCOA)
- • Deployed across specialties: Fall Risk (BalanceScan), Neuro, Ortho, Skin & Wound
- • Designed to improve data quality (e.g., re-capture prompts when an image/video isn’t usable)

AI in Medical Decisions:

Evidence ≠ Authority

AI should create evidence — not authority

Success: protocol capture → measurable signals

Success: detect change “between visits” (beyond scales)

Warning: accountability fog (“the model said...”)

Warning: automation bias + silent failure (bad input)

Debate: what’s the minimum audit trail to act?

Accountability -by-Design:

The Minimum Bar

Intended use + exclusions (support ≠ decide)

Human-in-the-loop: review rules + escalation thresholds

Audit trail: inputs, model/version, outputs, clinician action

Data quality gates: protocol + re-capture when unusable

Validation: external + subgroup + workflow impact

Monitoring: drift detection + incident response + rollback



Panelist Position

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Key Success Areas & Opportunities

Medical Imaging

AI detects patterns in radiology and pathology images earlier and at scale.

Precision Medicine

Genomics + clinical data enable personalized therapies.

Drug Discovery

AI accelerates molecular screening and target identification.

Clinical Risk Prediction

Early warning systems for sepsis and ICU complications.

Panel Message: AI is most powerful as a **clinical decision-support partner**.



Michael Massoth
Germany



Warnings & Risks & Critical Concerns

- ⚠️ **Algorithmic Bias:** Models inherit biases from historical healthcare data.
- ⚠️ **Black Box Decisions:** Complex models may lack explainability.
- ⚠️ **Automation Bias:** Clinicians may over-trust AI recommendations.
- ⚠️ **Data Quality Issues:** Incomplete or inconsistent medical records affect outcomes.
- ⚠️ **Legal Accountability:** Responsibility for AI-driven decisions remains unclear.

Panel Message: **The biggest danger is uncritical reliance on AI outputs.**

If the economic incentive rewards treatment instead of cure, AI may optimize healthcare revenue rather than patient health.



The Future: **Profit-oriented** Medical AI

If the most powerful **medical AI systems** are controlled by **profit-oriented organizations**, we must ask: are we optimizing healthcare — or optimizing business models?”

A **healthcare system driven by profit** risks optimizing for lifelong treatment rather than actual cures.

If **medical AI** is **controlled by profit-oriented actors**, we must ensure that algorithms optimize for patient health — not for long-term revenue streams.