AI and EQA

Presenter and moderator: István Juhos | EQALM ET WG
Panelists: Sverre Sandberg, Xavier Albe, Arjen Kars Boer, Ashley Cartwright

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Tech evolution

Record data

Apps

Connect systems

Internet

Assist us

AI-s

Benefits and drawbacks

Efficiency

Uncertainity

Two directions

AI for EQA

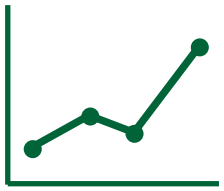
AI assists us

EQA for AI

We assess AI

AI for EQA

AI can support



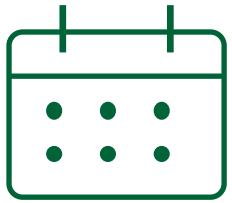
Decision

Pricing scenarios
by economic & market data, suppliers, participants



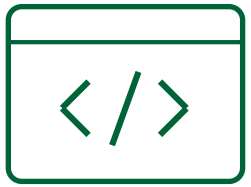
Check

Accreditation docs
Check SOP-s



Preparing

Surveys & feedback
In-time and useful



Building

Software tools
Excel, apps

Analyse quickly • Explain simply

EQA+NOPAM

Other data
lot, method, holidays

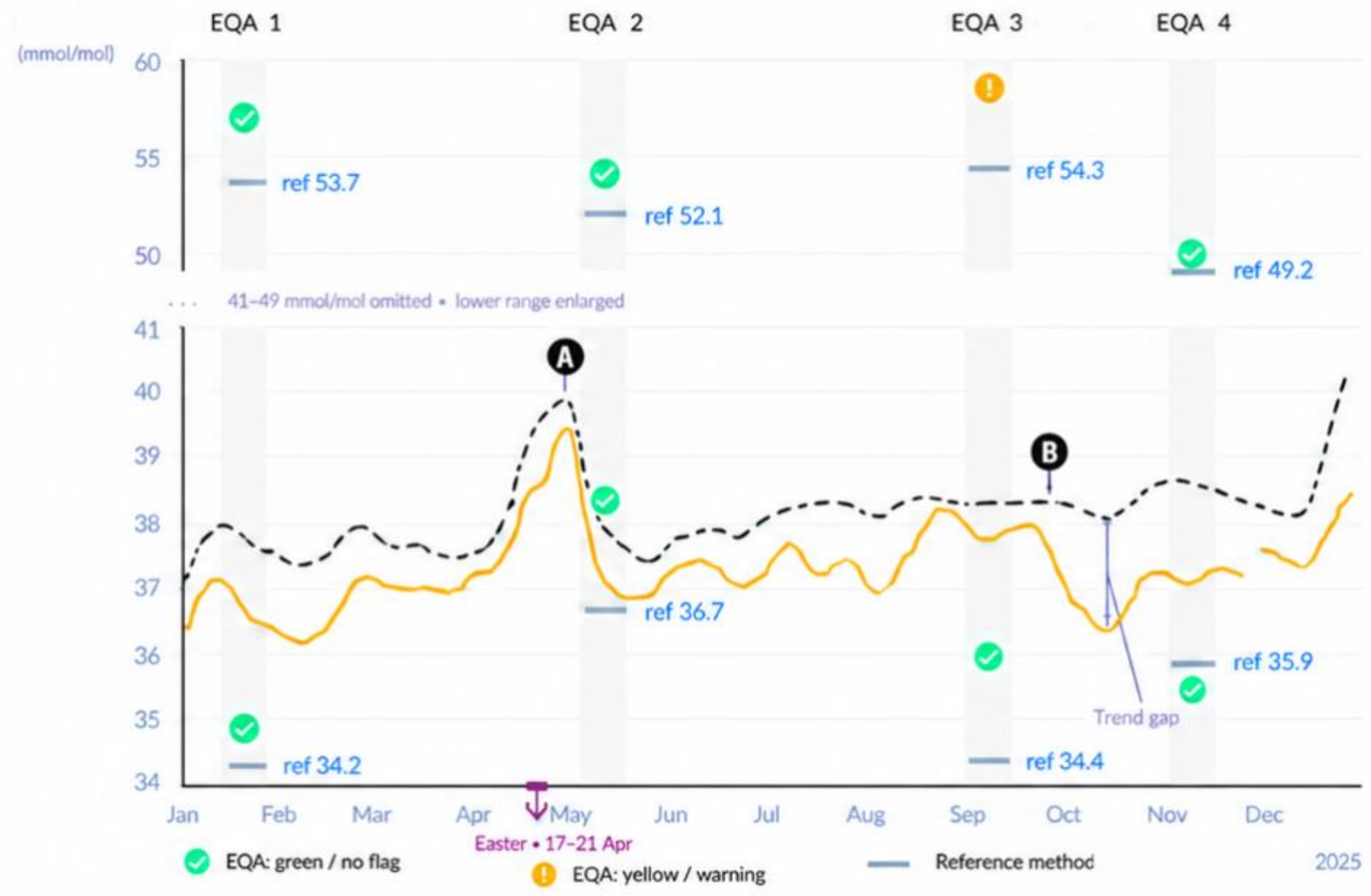
Guidelines
Sci. papers

AI-ASSISTED LAB WORKFLOW

Where do we have problem?

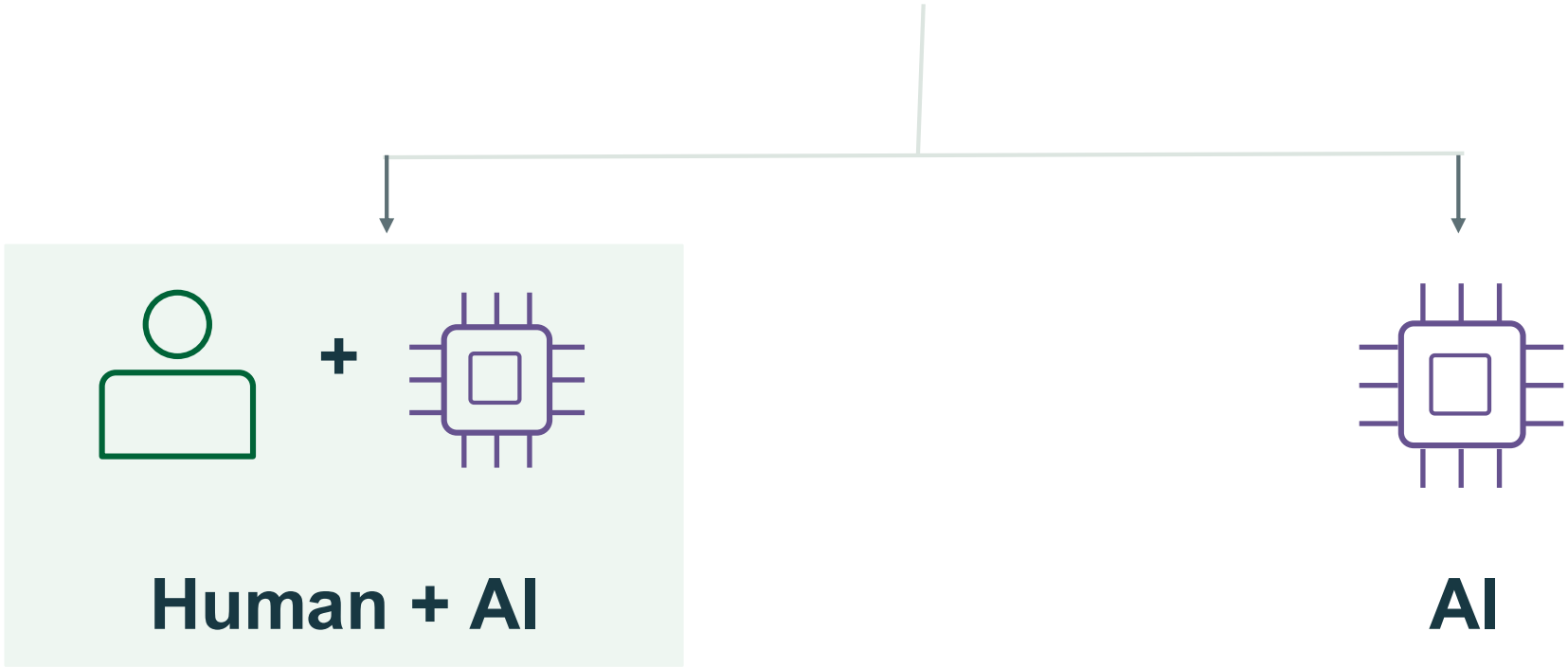
Summarise

AI TASK: Explain simply (NOPAM+EQA+…)

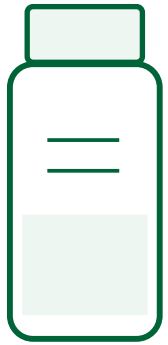


EQA for AI

Test the team and **the model**

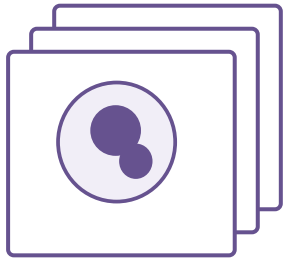


New material. The same need for trust.



Physical sample

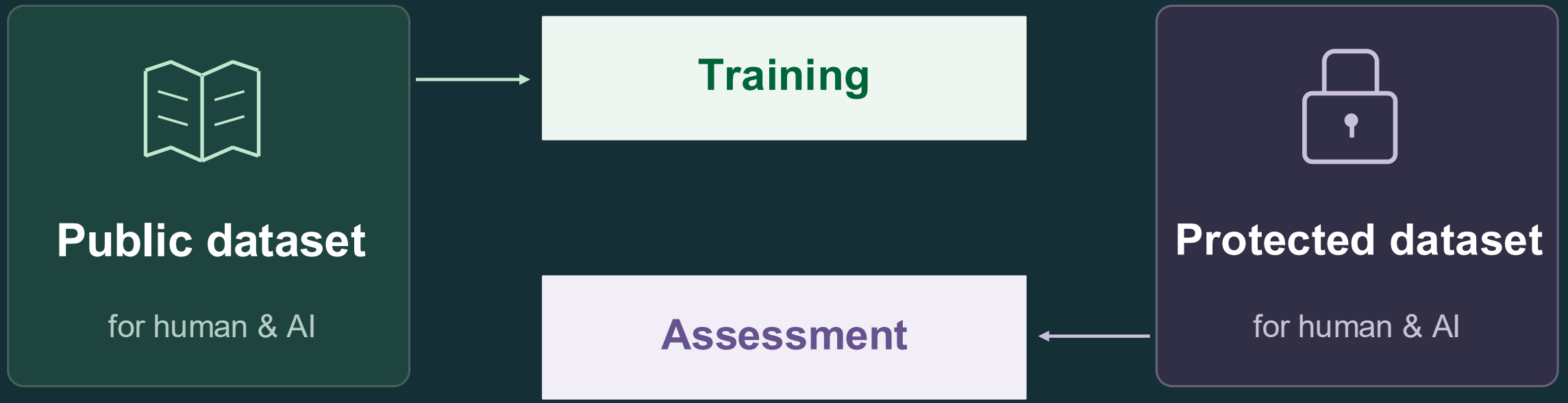
Composition
Stability
Commutability



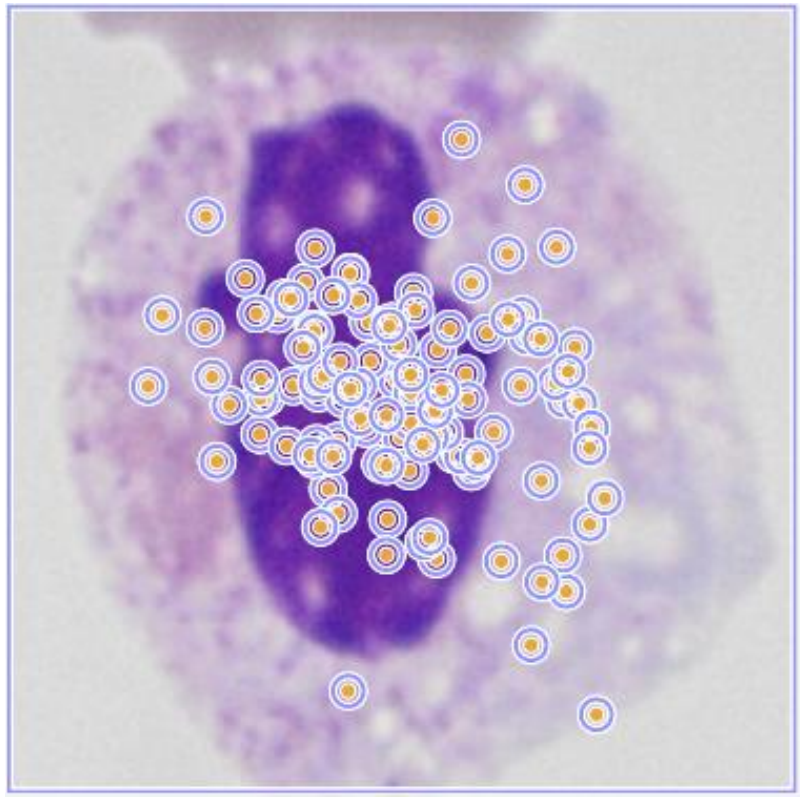
Digital case set

Reference quality
Clinical diversity
Independence

EQA dataset types



EQA can create datasets



Same cell, multiple annotations

124,957

cell-level analyses

1,025

participants

17

providers

15

countries

Participant consensus ≠ reference truth.

Cell type

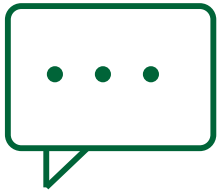
Expert vs participants

99% match

Expert vs ChatGPT

70% match

What EQA problems should we tackle?



Better feedback?



AI assessment dataset?

Our panellists

Sverre Sandberg

Fr. President EQALM and EFLM
Founder/Frm. President Noklus
Prof. Em. University of Bergen

Challenges in EQA and future

Xavier Albe

Frm. Treasurer EQALM
Founder/(co-)Chair VM/ET WG
Frm. with the CSCQ

Opportunities for AI-supported EQA

Arjen-Kars Boer

Chair, EQA for Alg.s, SKML
Clin. Chem. & Endocr.,
Catharina Hospital

EQA of AI white box algorithms

Ashley Cartwright

Lead Clinical Scientist
UK NEQAS for LI
Member, Human Last Exam project

EQA of AI black box algorithms