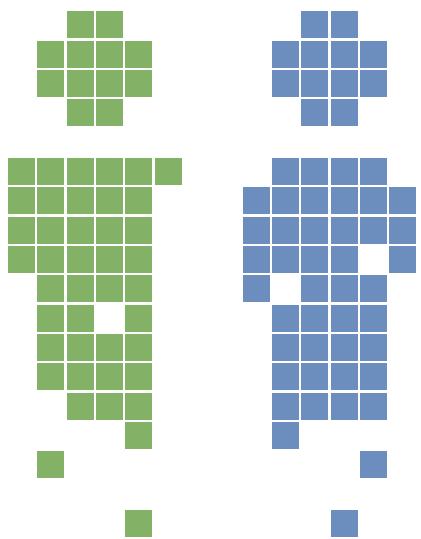
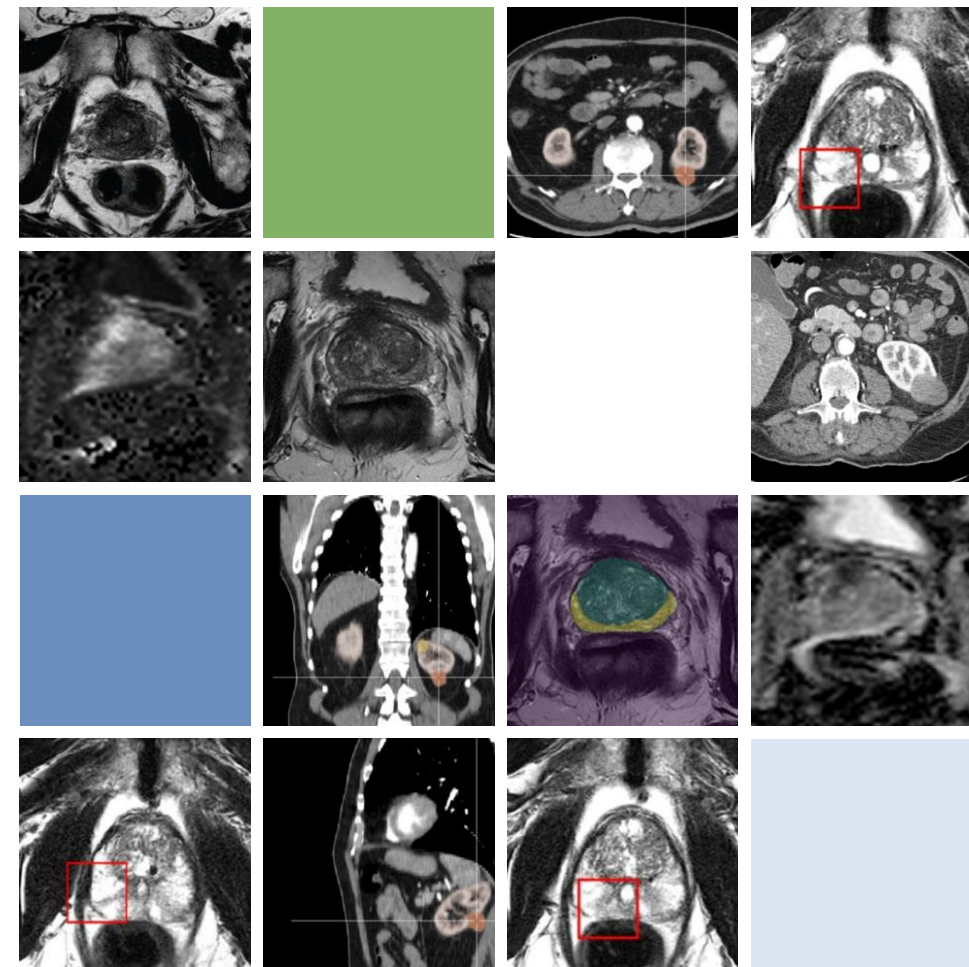




COMFORT

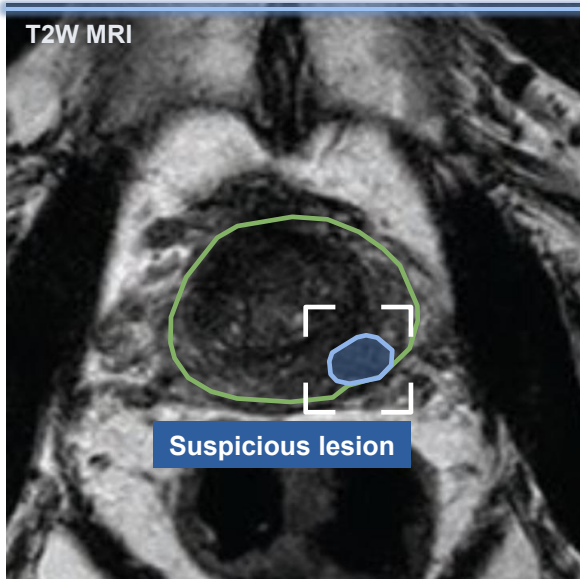
Keno Bressemer Project Coordinator, TUM Klinikum

AI4LUNGS Synergy Meeting, 21 October 2026



Funded by
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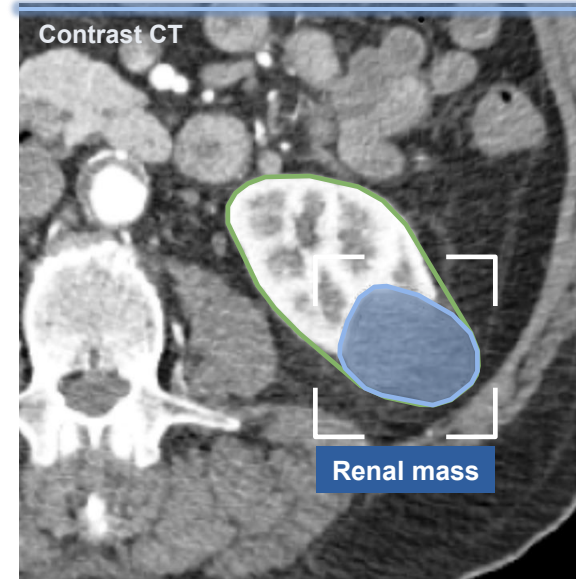
The clinical problem



Prostate cancer

Up to **53 %** of men recur after curative treatment.

No standard tool predicts individual risk at diagnosis.



Kidney cancer

10 to 15 % of resected renal masses are benign.

30 to 35 % of patients develop recurrence or metastasis after nephrectomy.

COMFORT develops and clinically evaluates multimodal AI that combines imaging, radiology reports and clinical data to stratify patients with prostate and kidney cancer.

The consortium



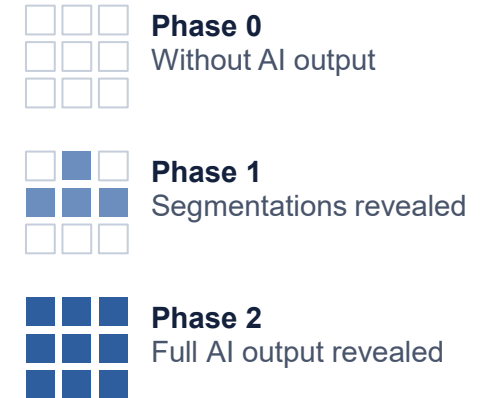
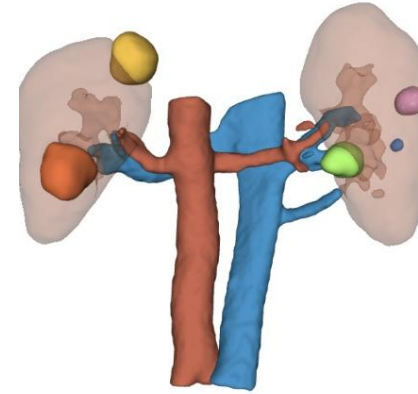
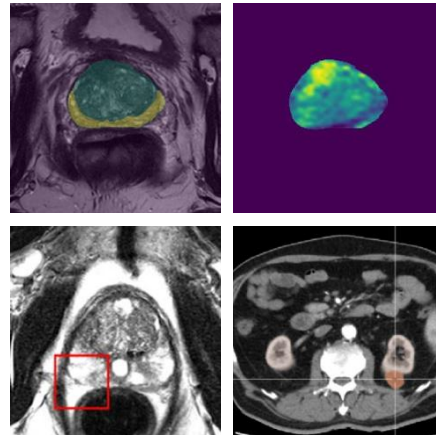
16 partners from **6** countries combine clinical study sites, AI research, industry, responsible AI and patient organisations.

Horizon Europe Research and Innovation Action with EUR 5.9 million EU funding, April 2023 to March 2027, coordinated by TUM.

- Coordinator
- Clinical study site
- Research, industry and management
- Patient organisation



From data to clinic



Data WP2

8,310 prostate MRIs, **3,021** annotated kidney CT and MRI sequences from **1,629** patients and more than **4.5 million** radiology reports.

Models WP3

Prostate mask, attention maps and salient patches for PI-RADS and csPCa risk. Kidney and lesion segmentation with Bosniak and RENAL scores.

Platform WP4

Four clinical workflows for prostate MRI and kidney CT, separate for radiologists and urologists, with mandatory clinician review.

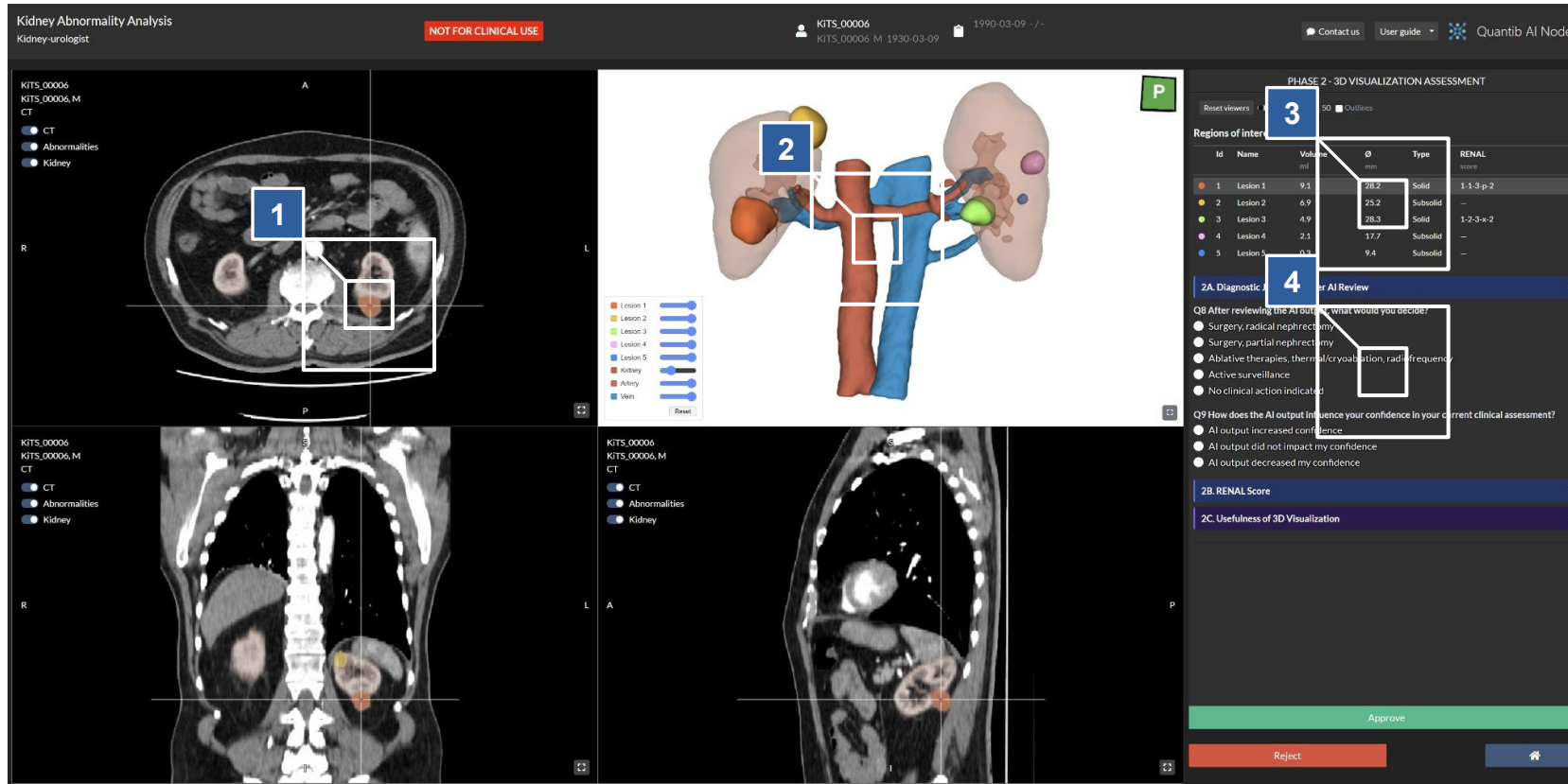
Clinical study WP4

Multicentre reader study in Germany, Greece, Italy and Spain with stepwise disclosure of the AI output.

Trust WP5

Bias analysis, explainability and human oversight in every step. In a survey of **13,806** patients in **43** countries, **70.2 %** preferred explainable AI even at lower accuracy.

The COMFORT platform



Kidney CT workflow for urologists, phase 2 of the reader study, example case KITS_00006

1 Segmentation

Kidneys and lesions in axial, coronal and sagittal CT.

2 3D model

Kidneys, lesions, arteries and veins for surgical planning.

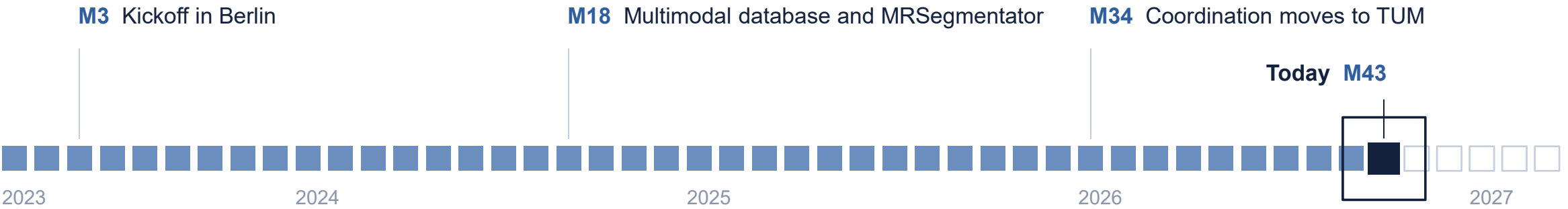
3 Lesion table

Volume, diameter, type and RENAL score per lesion.

4 Clinician input

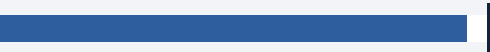
Decision and confidence recorded after each phase.

Where we stand

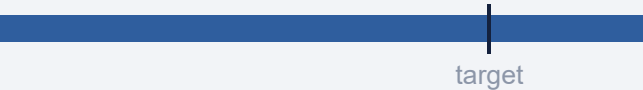


Cases collected

653 of **685** prostate cases



Kidney target of **315** exceeded by about **100**



Status September 2026

Pre-pilot

Four clinicians in Thessaloniki tested the platform.

Reading time was **10 to 15** minutes per case.

Their feedback added PSA as model input and heat maps instead of bounding boxes.

Next

Ethics approvals and clinician training in October.

Reader study in November and December 2026.

Results and final evaluation by March 2027.

Open for synergies



MRSegmentator

Open-source segmentation of **40** anatomical structures in MRI and CT.



Patient perspective

Survey data on trust in medical AI from **13,806** patients and **4,596** students.



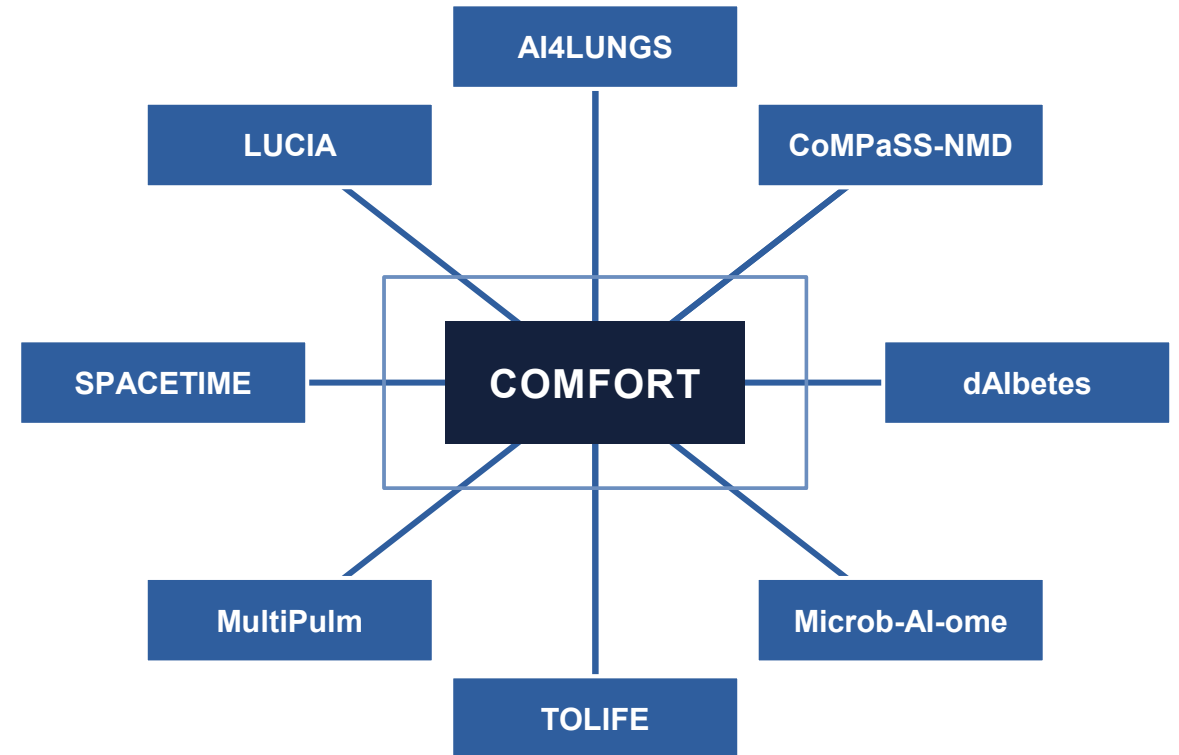
Clinical evaluation

Reader study design with stepwise AI disclosure, usability and AI literacy questionnaires.



Regulation

Policy briefs on regulatory frameworks for clinical AI, final versions by the end of 2026.



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