

Innovative Tools to Improve Cancer Surgery Training
Local Organizer: Wielkopolskie Centrum Onkologii (Greater Poland Cancer Centre, GPCC)

Under the umbrella of COST DISSECT
27-29 May 2026, Poznań, Poland

Chairs of the workshop:
Karol Połom & Pedro Gouveia

Day 1.

Venue: Poznan Supercomputing and Networking Center (PCSS)
Address: ul. Jana Pawła II 10; Poznań, Poland.
Room: PCSS' conference room (access available from the main hall)

8:30-9:00 - Registration and Welcome Coffee

9:00-10:30 - Session 1 - "AI in medicine: From Technical and Legal Perspectives to Research Use Cases"
Mikołaj Buchwald, Juliusz Pukacki, Piotr Wyrwiński

- Technological and legal background for AI development in medical sciences and oncosurgery
- How AI can support clinical practice?
- Use cases and PCSS' experience in medical projects
- Where the field is heading: opportunities, open problems, and realistic expectations

10:30-11:00 - Coffee Break

11:00-12:30 - Session 2 - "PIAST AI Factory at PCSS – Technical Overview of Tools, Models, and Workflows"
Joanna Kowalska, Tomasz Piontek, Wojciech Stefaniak

- PCSS and PIAST AI Factory Overview
- PIAST AI Factory Services
- ML Pipeline: data – training – validation – deployment – monitoring
- Statistical and imaging models in medicine
- XAI – can we trust AI models?

12:30-13:30 - Lunch

13:30-14:30 - Tour of PCSS

Server room and HPC/Quantum infrastructure; laboratories: optical, NOC, IoT, smart environment lab, medVC.

14:30-16:00 - Session 3 - "Security and Safe Use of AI in Medicine: From LLM Basics to Cybersecurity Risks"
Alex Terentowicz, Mateusz Twardawa

- Basics of LLMs, VLMs and effective prompt design
- Applications of LLMs, VLMs and AI agents in medicine and research
- AI in scientific workflows – literature review and Deep Research tools
- Key security risks in medical AI – adversarial attacks, data poisoning, privacy
- Trust, transparency and cybersecurity challenges in healthcare AI

Workshop Logic:

Session 1 - inspiration and real-world examples.

Session 2 - PCSS technologies and background.

Tour – presentation of the infrastructure in practice.

Session 3 - concrete skills and security.

Day 2.

Venue: Wielkopolskie Centrum Onkologii (GPCC)

Address: ul. Garbary 15; Poznań, Poland,

Room: No. 6051 (Auditorium, 6th floor)

Format: 20-minute presentation + 5-minute discussion (Q&A)

08:00-08:30 - Registration

Session 1 - "Foundations, Ethics & Clinical Implementation"

Moderators: Witold Kycler, Karolina Mazurkiewicz

- 08:30-08:35 - Welcome Address - *Julian Malicki, GPCC; Poznań (Poland)*
- 08:35-09:00 - Introduction to AI in Medicine - *Karol Połom, GPCC; Poznań (Poland)*
- 09:00-09:25 - Clinical implementation of AI - *Denise Hilling, Erasmus University; Rotterdam, (Netherlands)*
- 09:25-09:50 - Why the EU Needs Guidelines for the Safe Implementation of AI in Surgery - *Andrew Gumbs, Hôpital Antoine Bécclère; Paris (France)*

09:50-10:10 - Coffee Break

Session 2 - "Surgical Oncology & Advanced Imaging"

Moderators: Hanna Perz, Michał Oko

- 10:10-10:35 - AI in Surgery: A General Overview - *Andrew Gumbs, Hôpital Antoine Bécclère; Paris (France)*
- 10:35-11:00 - AI in Gastric Cancer Surgery - *Karol Rawicz-Pruszyński, Medical University of Lublin; Lublin (Poland)*
- 11:00-11:25 - The New Clothes for Cinderella - AI Prediction of Aesthetic Outcomes for Breast Cancer Surgery - *Maciej Bobowicz, Medical University of Gdańsk; Gdańsk (Poland)*
- 11:25-11:50 - AI in pathology: Present applications and emerging trends - *Witold Rezner, Holy Cross Cancer Center; Kielce (Poland)*
- 11:50-12:15 - Integrating AI and VR in Medical Training - *Povilas Ignatavicius, Lithuanian University of Health Sciences; Kaunas (Lithuania)*

12:15-13:15 - Lunch Break

Session 3 - Computer Vision, AR/VR & Training

Moderators: Jakub Janowski, Jakub Kaczyński

- 13:15-13:40 - Computer Vision and Surgery - *Shlomi Laufer, COST member, Technion - Israel Institute of Technology; Haifa (Israel)*
- 13:40-14:05 - Breast cancer surgery with Augmented Reality - *Maria Batrakova, Champalimaud Foundation; Lisbon (Portugal)*
- 14:05-14:30 - AR/VR in clinical practice using Apoqular - *Maciej Antoszczuk/Jarostaw Skokowski, ApoQlar; Poznań (Poland) / The Academy of Applied Medical and Social Sciences; Elblag (Poland)*
- 14:30-14:55 - (Advanced) methods for perfusion imaging analysis – lessons learned from radiology - *Ronald Borra, University Medical Center Groningen; Groningen (Netherlands)*

14:55-15:20 - AI-Assisted Scientific Experts Consultation: Accelerating Medical Writing and Decision Processes - *Enzo Troncone, Butterfly Decisions; Salerno (Italy)*

15:20-15:35 - Short Coffee Break

Session 4 - Implementation & Future Outlook
Moderators: Arkadiusz Spychała, Karol Połom

- 15:35-16:00 - AI as a Tool: From Hype to Practical Usage in Daily Medical Practice - *Przemysław Czuma, Piekarskie Centrum Medyczne (Piekary Medical Centre); Piekary Śląskie (Poland)*
- 16:00-16:25 - The Hospital of ~Tomorrow~ Today: Practical Examples of AI supported automation in Polish hospitals - *Barbara Klaudel, Gdańsk University of Technology; Gdańsk (Poland)*
- 16:25-16:50 - Digital Azimuth for Future Medical Specialties - *Konrad Karcz, Ludwig Maximilian University of Munich; Munich (Germany)*
- 16:50-17:15 - Fluorescence perfusion in colorectal surgery and AI help - *Ronan Cahill, University College Dublin; Dublin (Ireland)*

17:15 - Closing Remarks & Adjourn

Day 3.

Speakers: Pedro Gouveia & Maria Batrakova, *Champalimaud Foundation; Lisbon (Portugal)*

Venue: Wielkopolskie Centrum Onkologii (**Greater Poland Cancer Centre**)

Address: ul. Garbary 15; Poznań, Poland,

Room: No. 6051 (Auditorium, 6th floor)

Format: 09:00-13:00, hands on

No-Code Clinical AI Hackathon

Time	Phase	Activity
Hour 1	Orientation	
9:00-9:10	Welcome	House rules, logistics, tool account check. Confirm every participant has Google + Elicit/Consensus accounts open.
9:10-9:20	PICO Framing	Brief refresher on turning a clinical question into a searchable research question. Walk through one example: raw question -> mapped P / I / C / O.
9:20-9:55	Live Demo	Full workflow demo using a pre-built example question. Step 1 - Consensus: search, read consensus score, note 6 key papers. Step 2 - Elicit: import papers, build extraction table (P, I, C, O per study). Step 3 - NotebookLM: upload papers, trigger Audio Overview, ask 3 targeted questions, generate slides.
9:55-10:00	Team Formation	Teams of 3-4. Each selects one Challenge Track (Section 5).

Hour 2	Research	
10:00-10:15	PICO	Teams frame their PICO for the chosen question. Write it out explicitly - this determines search terms.
10:15-10:45	Consensus	Search the clinical question. Note the consensus score. Identify 6-8 papers most relevant to the PICO. Copy DOIs/titles.
10:45-11:00	Elicit Setup	Import papers into Elicit (or AnswerThis / SciSpace). Set up an extraction column: population, intervention, comparator, outcome, sample size, limitations Begin uploading PDFs to NotebookLM in parallel (processing takes 2-5 min).
Hour 3	Synthesis	
11:00-11:15	COFFEE BREAK	
11:15-11:45	Extraction	Complete the extraction table. Identify: where do papers agree? Contradict? What is not measured? Gaps and contradictions are often the most valuable findings.
11:45-12:15	NotebookLM	Open notebook with uploaded sources. Trigger Audio Overview. Ask 4+ questions: 'What do these studies agree on?', 'Where do findings conflict?', 'What populations are excluded?', 'What would a critic say?' Generate slides (3-slide brief: question + PICO / evidence / gaps + recommendation). Generate infographic based on the papers.
Hour 4	Showcase	
12:15-12:30	Prep	Finalise slides. Rehearse 3-minute pitch.
12:30-13:00	Pitches	Each team: 3 min pitch + 2 min Q&A. Max 6 teams = 30 min. Facilitator keeps strict time.
13:00-13:15	Debrief	Key questions: where did the AI mislead you? Where did it save time? What would you have missed?