

The present and future of AI in Radiology

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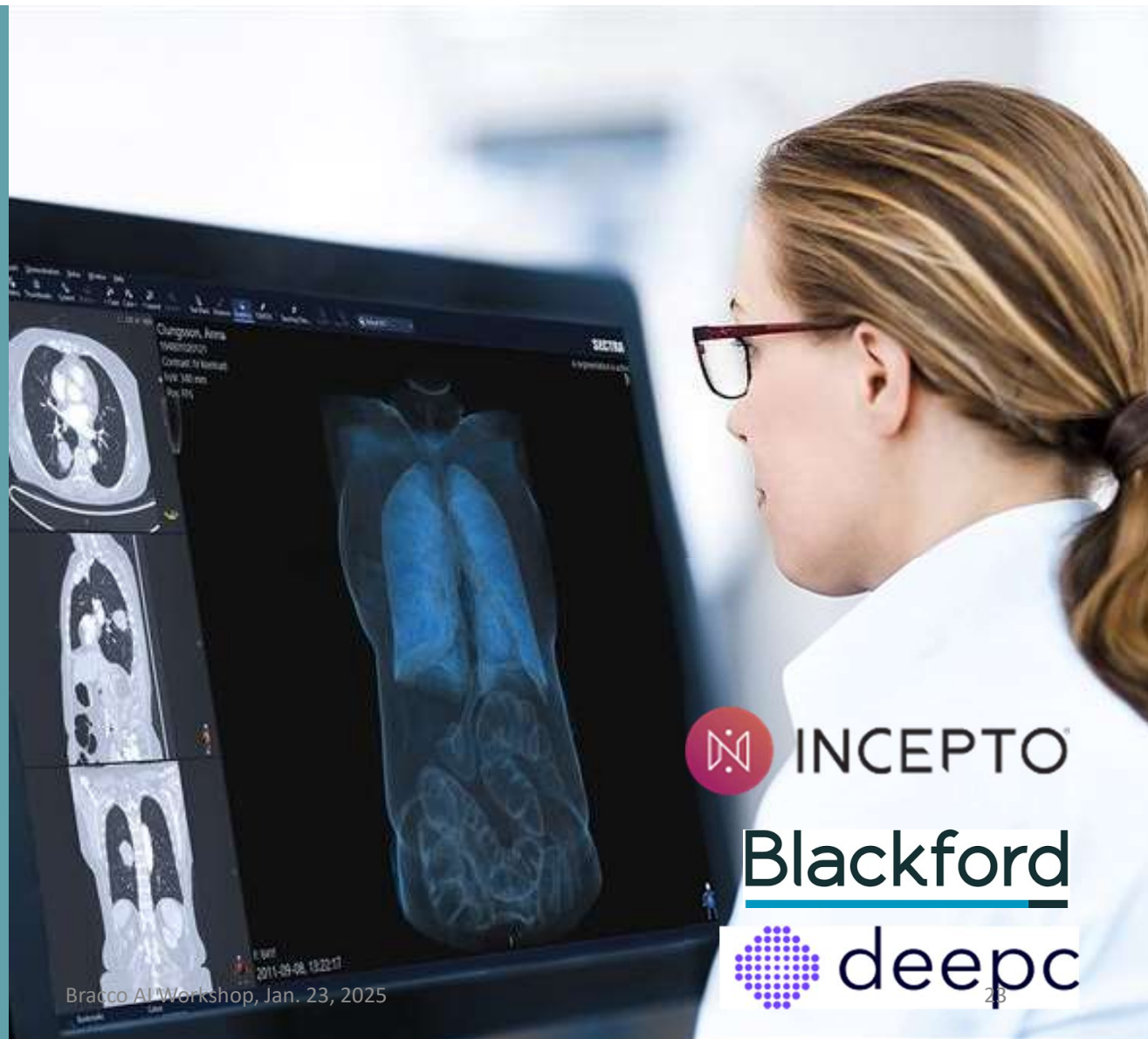
I. Introduction

1. Historical overview
2. Radiological applications
3. Clinical adoption rate (Europe)
4. What has changed recently?
5. New opportunities
6. Future
7. Education

Clinical adoption rate of AI in Europe

Where can we find AI-tools?

- Individual AI vendors
- Integration and collaboration of AI vendors on the same AI OS platform.
- Vendor independent AI platforms
- Platforms linked to PACS or modality (OEMs)
- Pharmaceutical industry platforms
- A constantly evolving market



Radiology Adoption Rates of AI

- Europe:
 - 35% adoption rate in clinical AI tools
 - mostly in pilot and research phases.
- US:
 - 10-15%% adoption rate
- Gap is expected to narrow as evidence of AI efficacy grows.

35% AI implementation in Europe

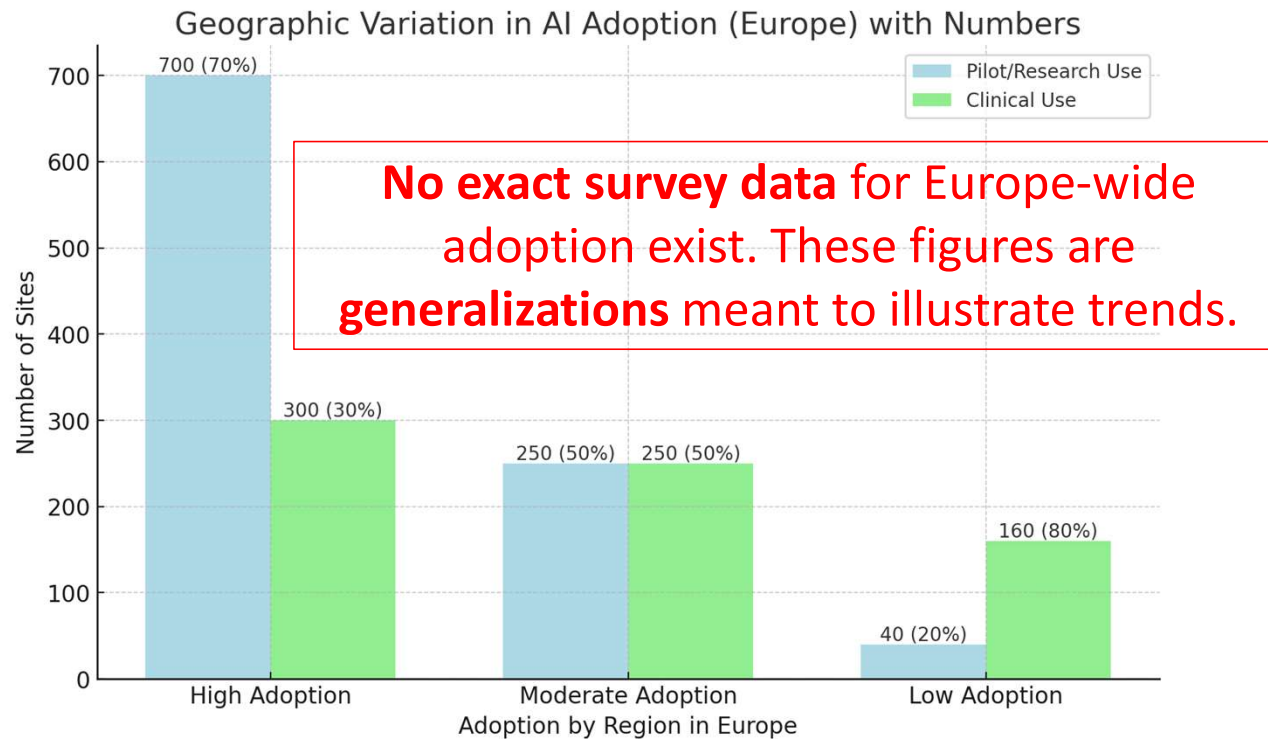
1. Pilot and Research (~70-80%):

- Most of the AI activity in Europe involves testing and validation in academic hospitals or research-focused institutions.
- Focused on evaluating AI for diagnostic accuracy, workflow integration, and clinical impact.

2. Clinical Use (~20-30%):

- Limited to specific AI tools (e.g., AI for stroke triage, lung nodule detection, mammography, fracture detection).
- Clinical adoption is higher in private imaging centers or in countries with advanced healthcare infrastructure.

Geographical differences in adoption rate



Factors influencing geographic variations

1. Economic and Infrastructure Disparities:

1. Wealthier nations with better healthcare IT infrastructure adopt AI more rapidly.
2. Resource-constrained countries often prioritize other healthcare needs.

2. Regulatory and Privacy Challenges:

1. GDPR compliance increases complexity and slows adoption in some EU countries.
2. Countries with centralized healthcare systems (e.g., UK, Denmark) tend to manage this better.

3. Research and Funding Ecosystem:

1. EU grants and initiatives (e.g., Horizon Europe) have bolstered research in high-adoption countries.
2. Limited participation from lower-adoption regions due to fewer resources or expertise.

Most EU Funding in AI for Radiology

- **Top countries in AI for Radiology R&D**

- The UK, Germany, France, and the Netherlands stand out as the leaders in developing AI for radiology.
- These countries have strong academic, governmental, and industrial ecosystems, contributing significantly to AI research and development.

- **Most EU Funding**

- Germany, the UK, and France secure the largest portions of EU funding
- the Netherlands, Switzerland, and Italy also receive considerable amounts, thanks to their involvement in large-scale European projects focused on healthcare AI.
- The landscape is dynamic, and these countries continue to push the envelope on AI integration into radiology, backed by substantial EU funding.



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