

Will AI replace physicians? AI reallocates roles, risks and liabilities

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Will AI replace physicians? AI reallocates roles, risks and liabilities

We have come a long way from the invention of the stethoscope until the detection of breast cancers and pulmonary emboli by computers with better success rates than when done by radiologists.

AI is progressively revolutionizing healthcare on a global basis with some tasks that are now more securely performed by AI than healthcare professionals, for instance in diagnostics imaging.

The doctor-patient relationship needs to adapt itself to this new paradigm.

Healthcare professionals are led to acquire new competences.

To what extent will their roles evolve?

How do we anticipate, minimize and master liability risks linked to AI?

We will discuss these issues with experts from the medical, industry, insurance and legal sectors.

Speakers



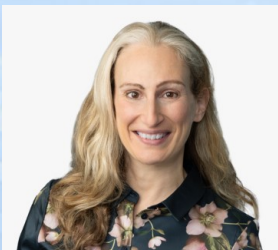
Agnès Malgouyres – Head of AI Program, Siemens Heathineers, Paris, France



David Gruson – Health Programme Director – Luminess and Founder – Ethik-IA, Paris, France



Keren Kanir – Partner, Horn & Co, Tel Aviv, Israël



Jennifer Geetter – Partner, McDermott Will & Emery, Washington DC, USA

Moderators



Elysangela de Oliveira Rabelo Maurer
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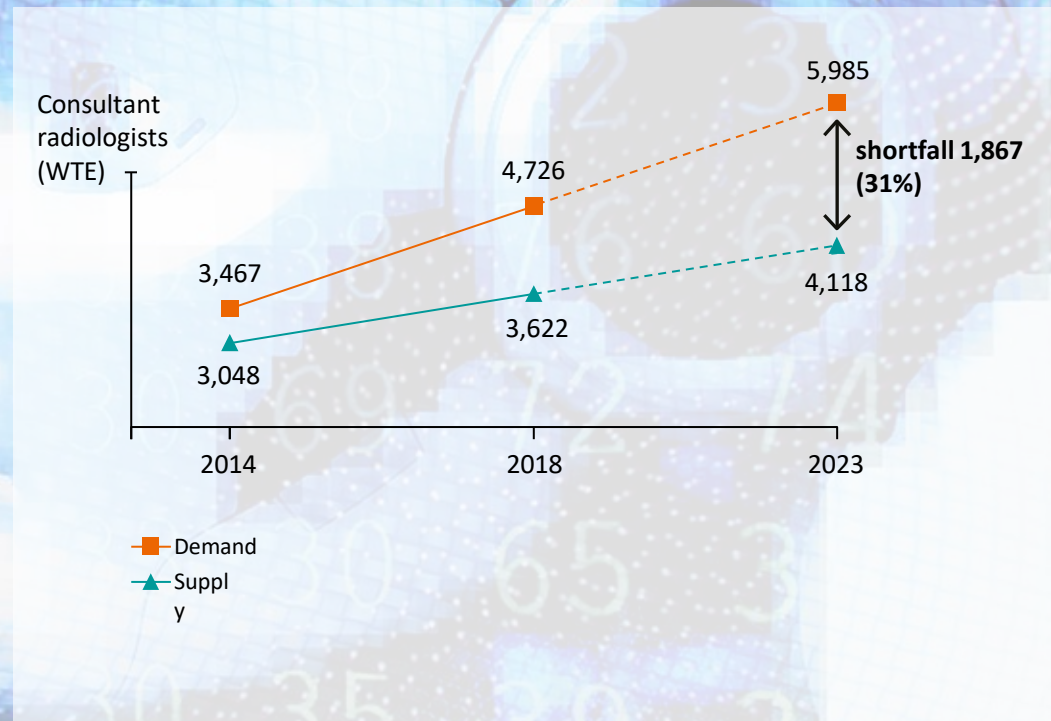


Cécile Théard-Jallu
Partner, De Gaulle Fleurance & Associés – France
Vice Chair, IBA Healthcare and Life Sciences Law Committee



The radiologists' workload is steadily increasing

In many countries, the number of radiology examinations is skyrocketing, while the number of radiologists and imaging specialists is not keeping up with the trend.



The result is a dramatically increased workload for radiologists.¹

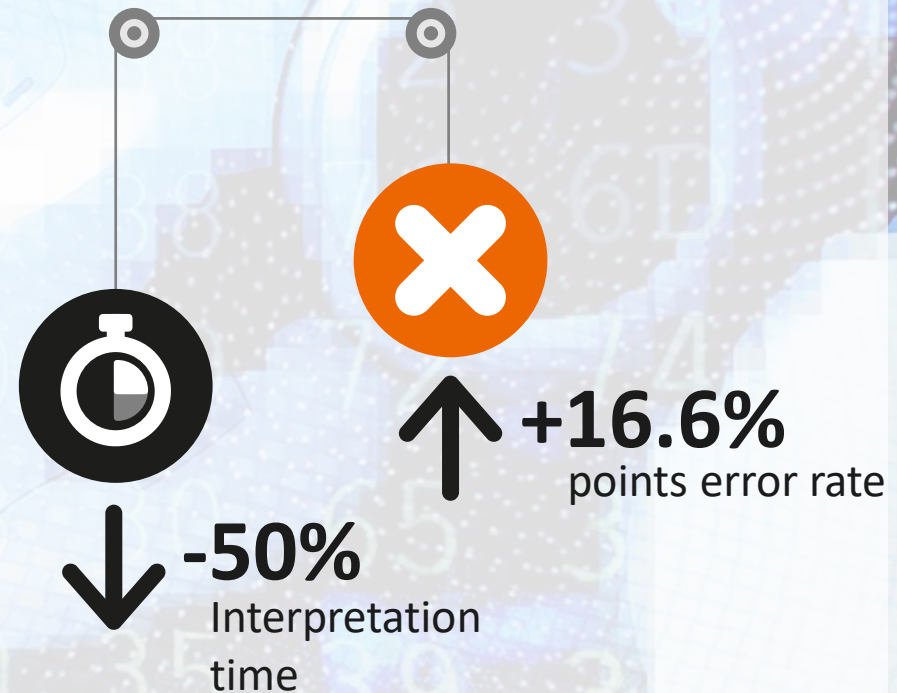
¹ The Royal College of Radiologists. Clinical radiology, UK workforce census 2018 report. London: The Royal College of Radiologists, 2019.

Less interpretation time means higher error rates

With shorter turnaround time, the error rate rises.

The retrospective error rate among radiological exams is 30%.¹ Studies show that cognitive factors significantly contribute to diagnostic errors.²

Cutting in half the interpretation time of radiologists increases the interpretation error rate percentage by 16.6%.³



Introduction: Some facts & figures

Boom in AI use in the healthcare sector:

Global statistics

- **How AI helps according to healthcare industry players:**

- improve quality control → 60%
- monitoring and diagnosis → 42%

Source : *Statista*,
<https://bit.ly/3wg8U30>

- **AI systems in healthcare forecast revenue:**

- \$6,7 billion in 2021
- \$6,16 billion in 2022

Source :
Statista, <https://bit.ly/3w6XPBk>,
<https://bit.ly/3CKtQjV>

- **COVID19 impact on AI use in healthcare market:**

- 55% AI market growth between 2020 and 2021
- 167,1% AI market growth from 2019 to 2021
- Market is estimated to witness a year-on-year growth of ranged between 34,9% to 48% in the next 5 years

Source : *Grand View Research*,
<https://bit.ly/3JqVmFC>

European statistics

- **Expected socio-economic impact of AI on European health systems:**

- 400,000 lives saved yearly
- €200 billion in annual savings (including opportunity costs)
- 1,8 billion hours freed up every year

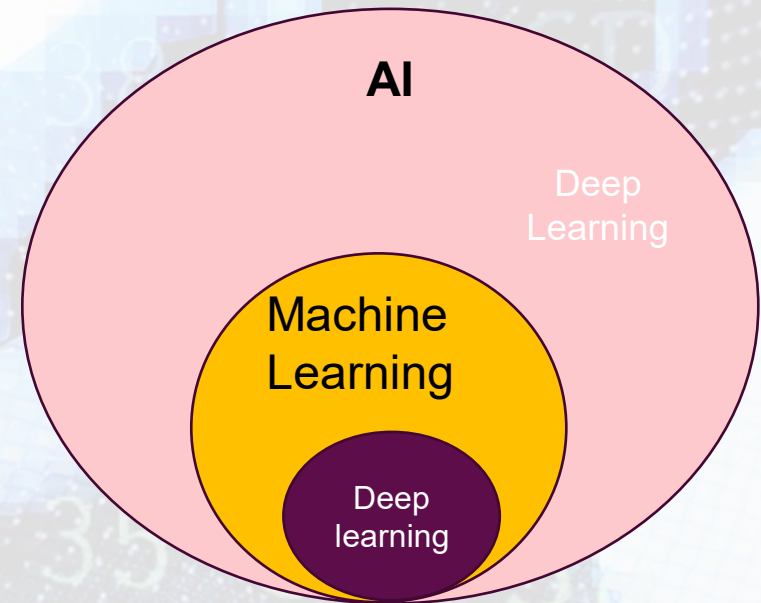
Source: *Deloitte*,
<https://bit.ly/3ielLuk>

What is AI? An encyclopic & scientific view

Set of theories & techniques meant to design machines able to simulate human intelligence (source : Larousse encyclopedia)

Behind the concept: « very varied technologies, constantly evolving, giving rise to specific applications for very specialised tasks » (OPECST)

Strong AI / Weak AI



Old concept (birth: 1943–1956), after two « hibernations », a new surge permitted by availability of massive data (big data) and acceleration in processors calculation capacity & speed

What is AI? Samples of legal concepts

EU: « software developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with » *(Draft AI Act, April 2021)*



Brazil: « system based on a computational process that can, for a certain set of human-defined objectives, make predictions and recommendations or make decisions that influence real or virtual environments » . *(Legislative bill 21/2020, approved by the Brazilian House of Representatives in September 2021, currently awaiting the Senate's consolidation)*

US: ?

Israel: ?

Will AI replace physicians?



Agnès Malgouyres

Head of AI Program,
Siemens Healthineers
Paris - France



Will AI replace physicians?



David Gruson

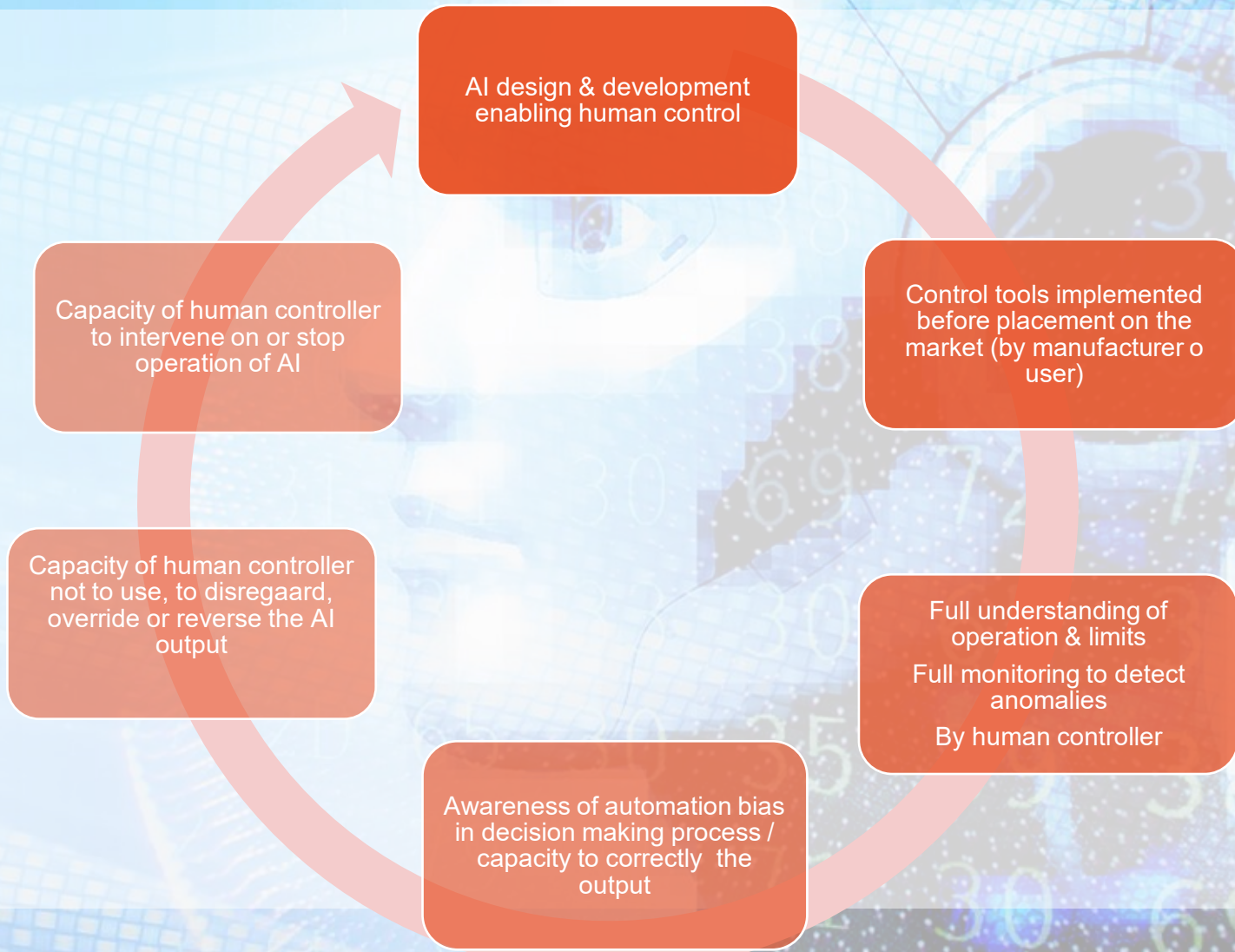
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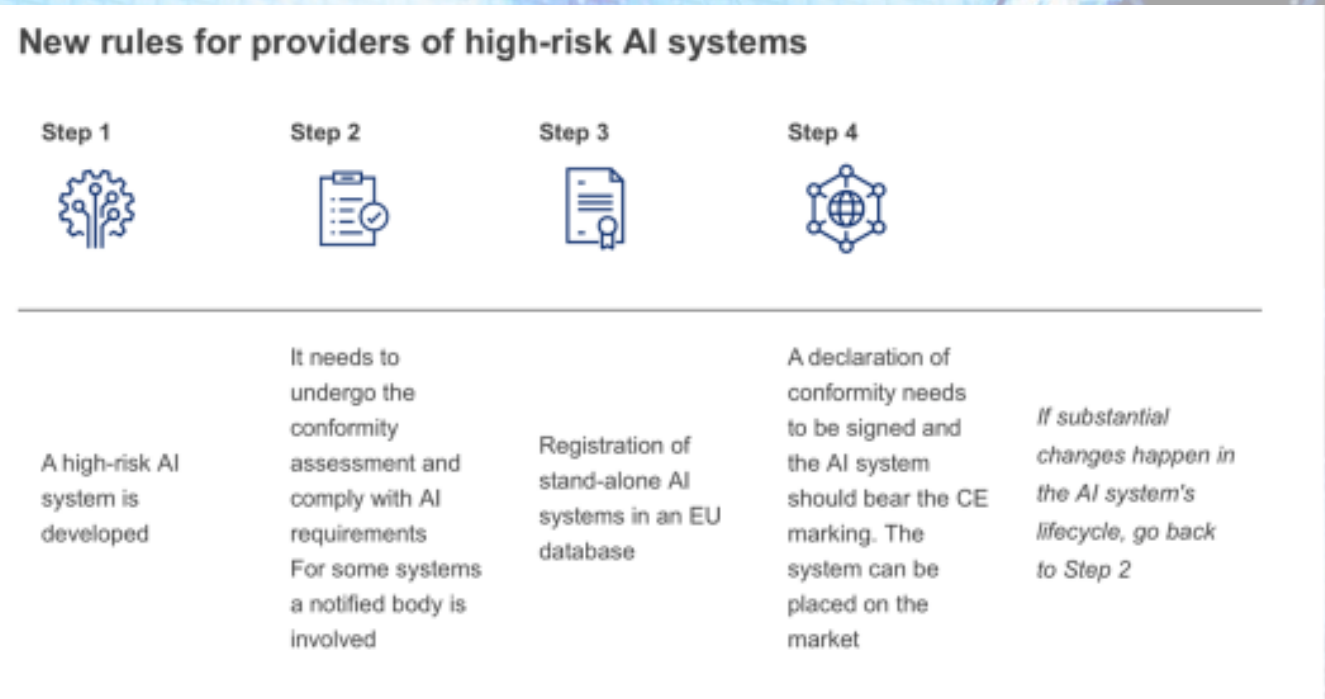
« Artificial Intelligence Act » proposed Regulation of 21 April 2021



« Artificial Intelligence Act » proposed Regulation of 21 April 2021 “Human oversight” – Article 14



EU Artificial Intelligence Act » proposed Regulation of 21 April 2021



Source : <https://lestempselectriques.net/index.php/2021/04/22/proposition-de-reglement-de-lia-de-la-commission-europeenne-entre-le-trop-et-le-trop-peu/>



Human oversight for MD integrating AI: France

Article L4001-3 of the Public Health Code (in force)

- I.- The health professional who decides to use, for an act of prevention, diagnosis or care, a medical device involving algorithmic data processing learned from massive data shall **ensure that the person concerned has been informed and that he or she is, where appropriate, informed of the resulting** interpretation.
- II. -The health professionals concerned are **informed of the use of this data processing**. The patient's data used in this processing and the results obtained are accessible to them.
- III.- The designers of an algorithmic processing mentioned in I shall **ensure that its operation is explicable for the users**.
- IV.- An order of the minister in charge of health establishes, after consultation with the Haute Autorité de santé and the Commission nationale de l'informatique et des libertés, the nature of the medical devices mentioned in I and their terms of use.



Speakers

AI in the legal practice



Jennifer Geetter

Partner, McDermott Will & Emery,
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Q & A session

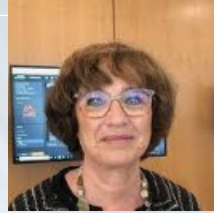
Any questions?



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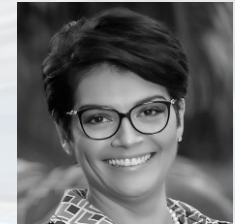
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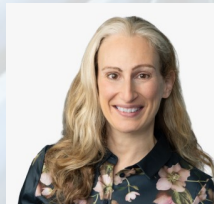
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THANK YOU!