Forum 3
The future is now – AI as a driver of sustainable healthcare?

Wednesday, 3 October 2018 | 14.45-17.15 | Kursaal C

Co-organised by COCIR and EHFG
With the kind support of Siemens Healthineers, Philips and GE Healthcare

Panel 1: The added value of AI in prevention and treatment

Marcus Zimmermann-Rittereiser
COCIR Artificial Intelligence Task Force Chair
Vice President Population Health Management and Partner Management, Siemens Healthineers
Industry Perspective

- What do we mean by AI in Health and Care?
  - CADe, QIT, CDS, CADx*
- 7 Focus areas to play successfully
  - **Build awareness** with Innovators/early adaptors/KOLs
  - Support and **enable access** to massive amount of Imaging Data
  - Build a **sustainable G2M** Modell by Provisioning AI-plattforms integrated into clinicians daily routine workflow vs. stand alone applications
- **Drive adoption** by impact driven (COF*-Perspective) use cases
- Support deployment by **robust Legal framework**
- Consider latest **Regulatory Framework**
- Apply **Ethical Framework**
- Why is it important?

* CADe= Computer Aided Detection, QIT=Quantitative Imaging Tools, CDS=Clinical Decision Support. CADx= Computer Aided Diagnosis,
* COF: Clinical – Operational Financial
Why is it important?

Increasing workload
- Growth of CT/MR scanning 10-12% but radiologist workforce only 3% per year for the last ten years¹

Decreasing turnaround time
- Halving interpretation time of radiologists leads to an increase in interpretation error rate by 16.6 %point²

Diagnostic precision through quantification
- Cognitive factors (perception, failed heuristics) contribute to the diagnostic error in 74% of cases³

¹ The Royal College of Radiologists
² Faster Reporting Speed and Interpretation Errors: Conjecture, Evidence, and Malpractice Implications, Journal of the American College of Radiology, Volume 12, Issue 9, September 2015, Pages 894-896
³ Cognitive and System Factors Contributing to Diagnostic Errors in Radiology American Journal of Radiology, 201, September 2013
AI is key enabler for Digitalization
AI adds value in every workflow step

- **AI powered Acquisition & Examination**
  - Accurate patient positioning
  - Spine and rib unfolding

- **AI powered Processing & Interpretation**
  - ALPHA Anatomical Ranges
  - Anatomy Visualiser

- **AI powered Guidance & Workflow**
  - Cardiovascular TAVI-Planning
  - True fusion
Use Case: AI in Chest Imaging
Use Case: AI in Chest Imaging
Recommendations to Member States

1. **Create Awareness with Innovators/KOLs**
   
   AI technologies present huge opportunities to improve quality of people’s live and transform healthcare

2. **Enable publicly available, disease driven, national, high quality Data sets and related framework/standards of using it**
   
   The more data the algorithm is trained on the better it gets

3. **Invest in building a robust, powerful, scalable and highly secure data infrastructure/Data Center**
   
   e.g. Super Computer with 12 PetaFLOPS \((12 \times 10^{15})\) of computing power

4. **Set-Up and Drive education of Data Eng.-/Data Scientists**
   
   Building impactful AI solutions need skilled DE/DS* - creating new jobs in Europe

---

* DE=Data Engineers/ DS=Data Scientist