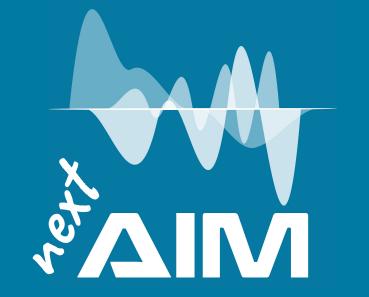
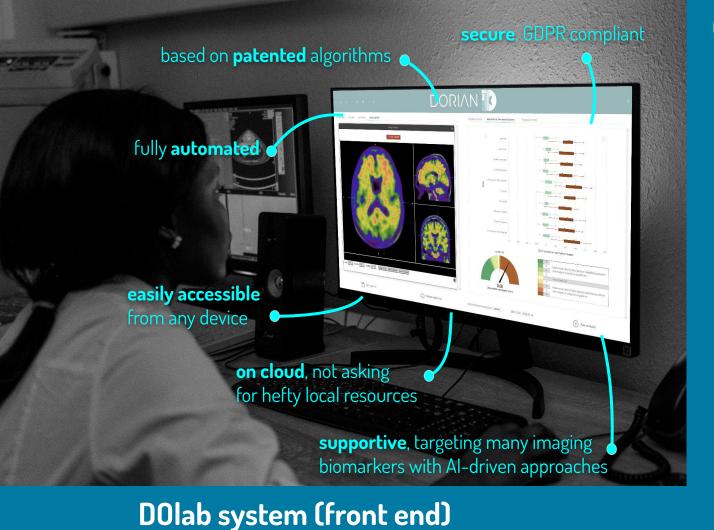
Artificial Intelligence in Medicine



The D0lab research environment

Paolo Bosco next_AIM annual meeting 14.02.2023, Milano





Our one-stop shop solution for everyday quantitative diagnostic imaging

REDUCE <

misdiagnosis

IMPROVE <

accuracy in patient monitoring

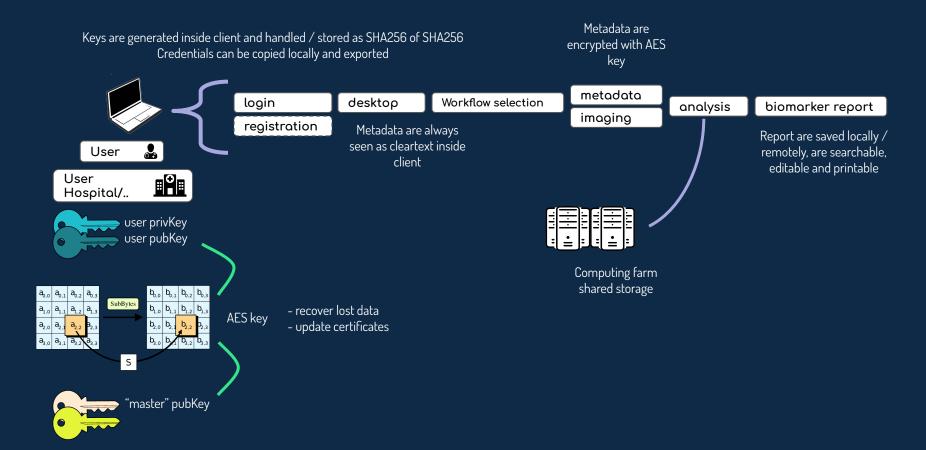
SPEED UP <

the image analysis time



Data flow in DOlab





Backend structure...

GDPR-compliant data model

Scalable computing

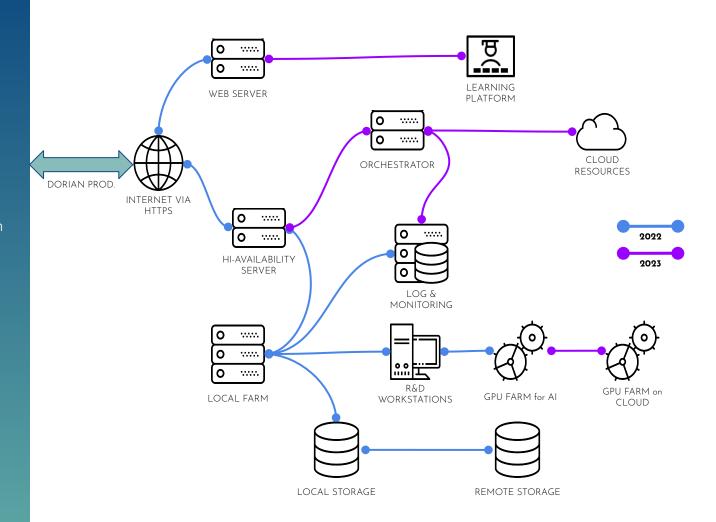
Docker-based implementation

Cloud-ready

Secure & Manageable

Virtualized components

Dedicated development farm for AI









<15 MIN> PROCESSING



INFORMED REPORT





■ Data Upload

Medical data are checked, anonymized, encrypted and sent to our servers 2. Remote Analysis

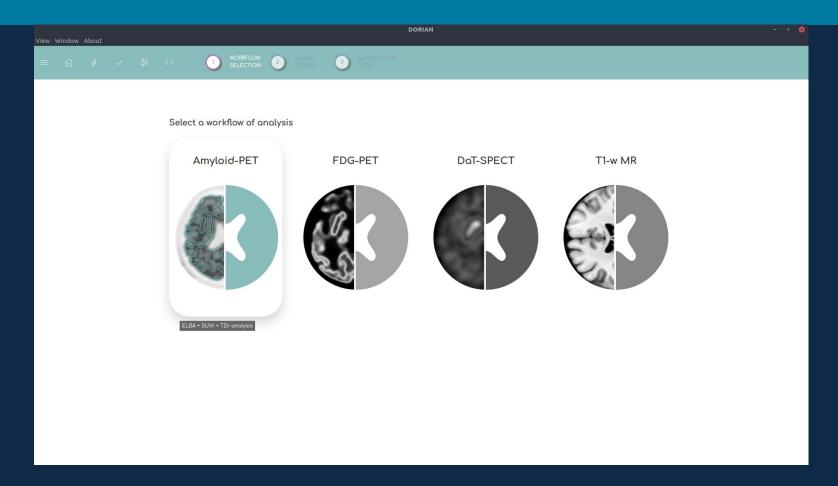
Cloud processing powered by patented algorithms

3 Result Download

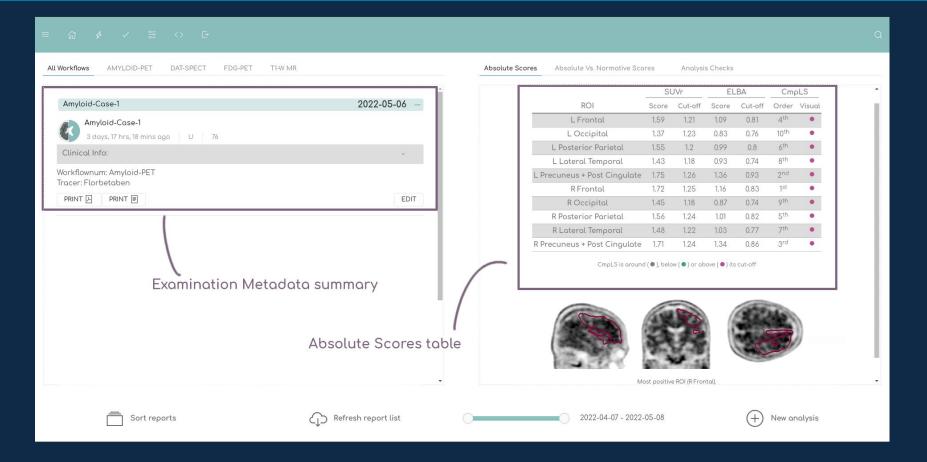
Quantitative markers-rich report made available for medical reporting

D0lab environment

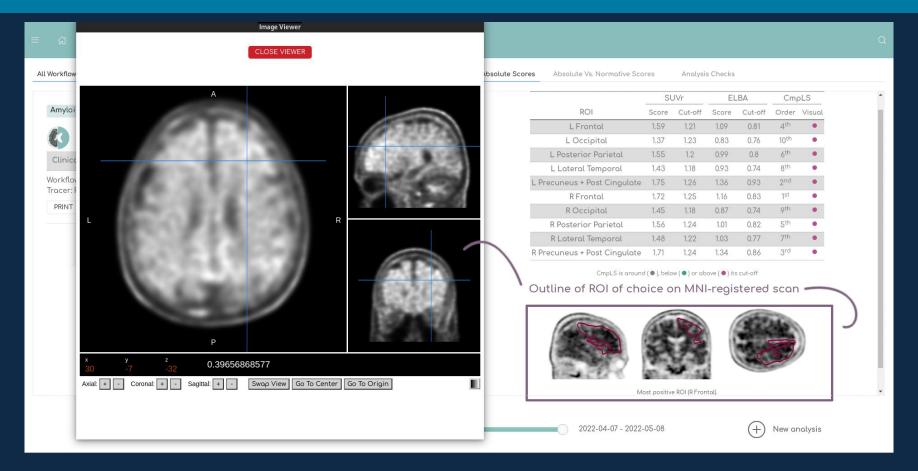




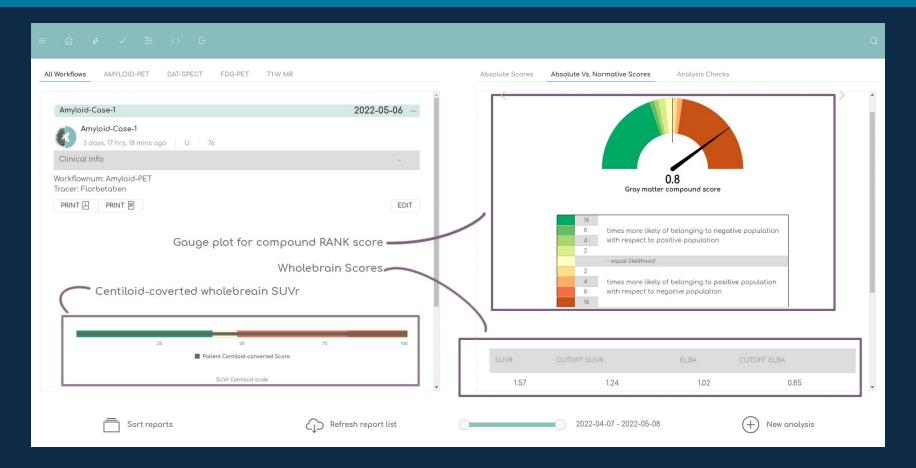




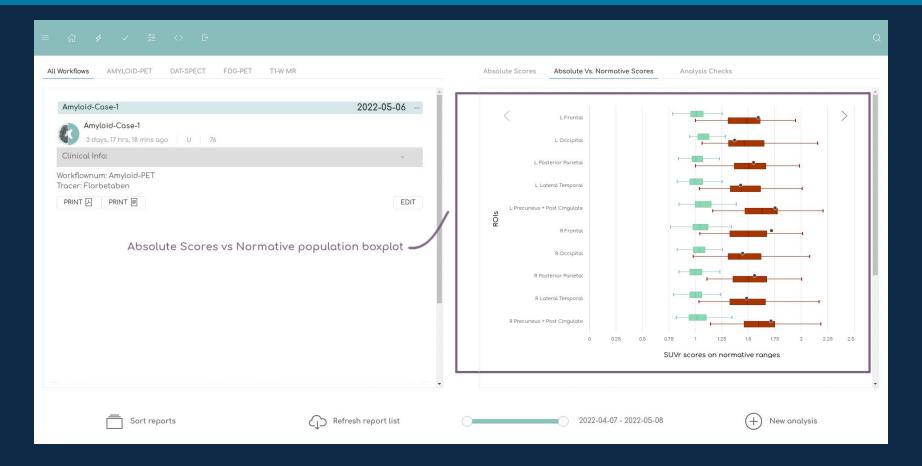




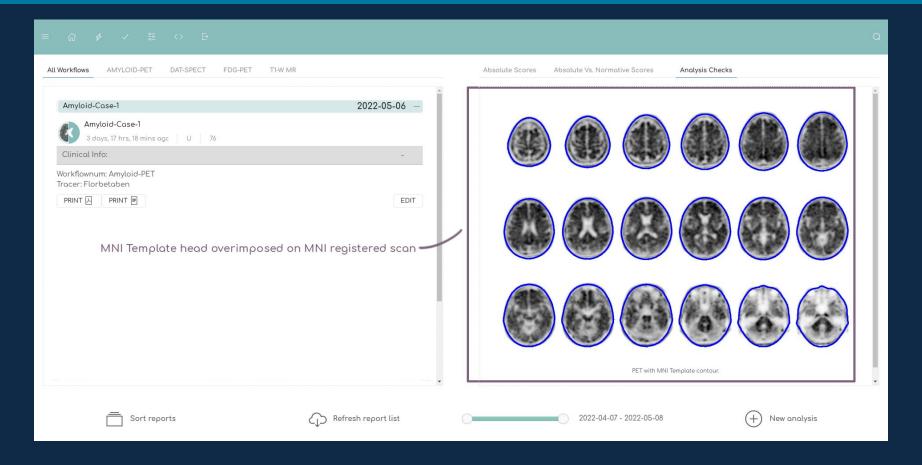






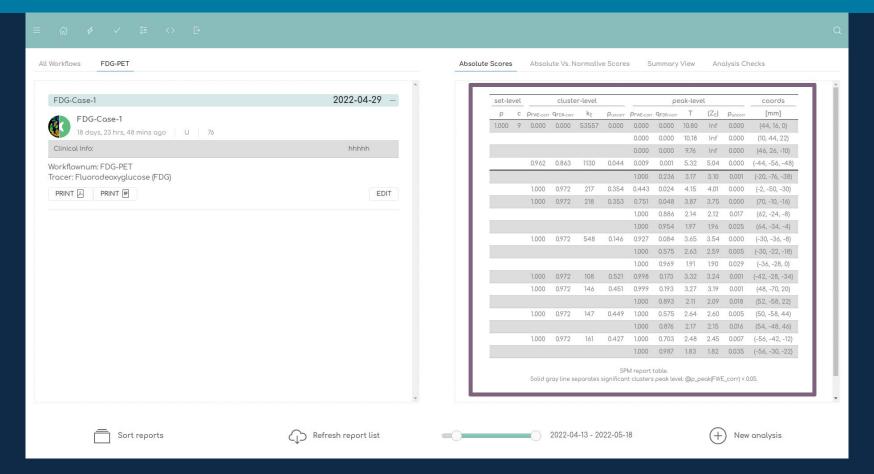






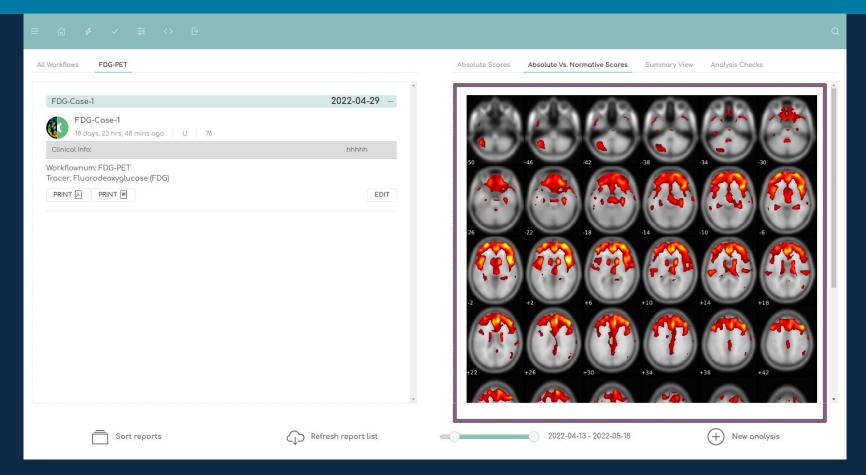
DOlab environment (FDG)





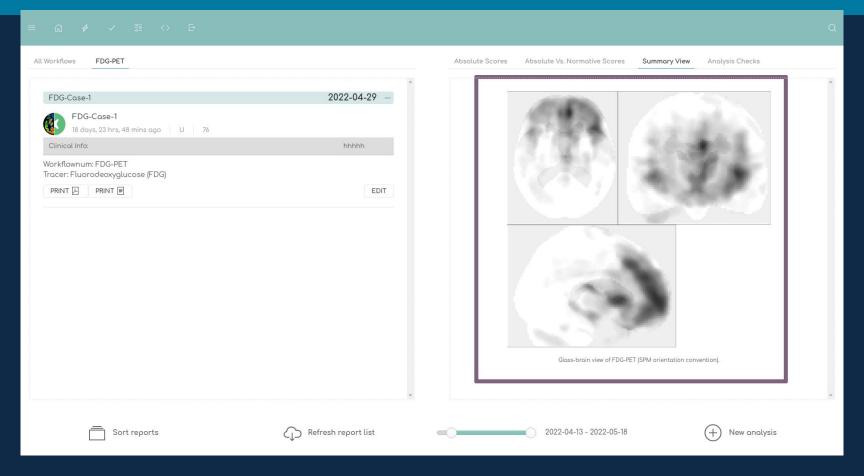
DOlab environment (FDG)



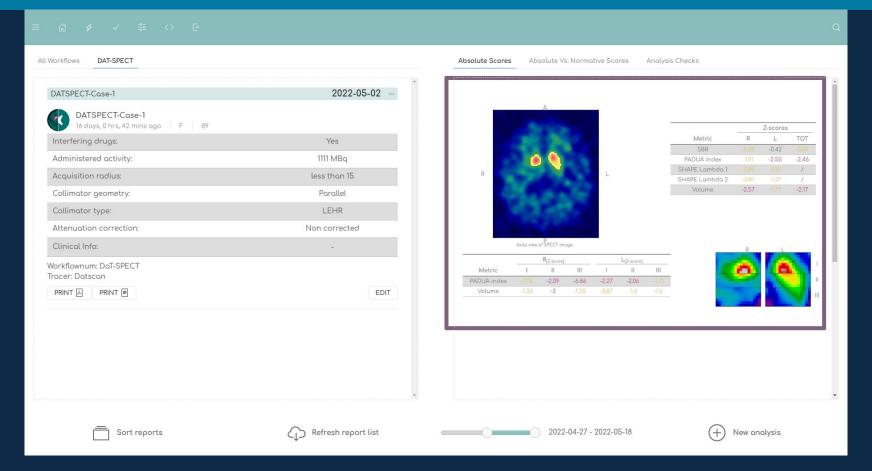


DOlab environment (FDG)

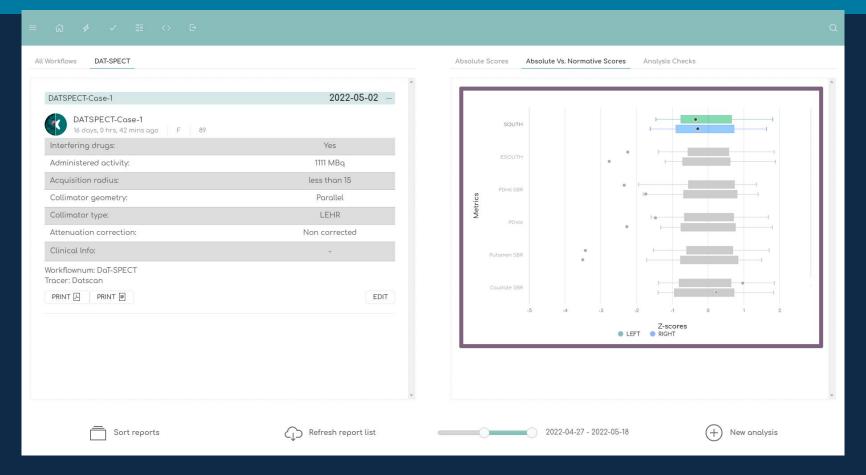




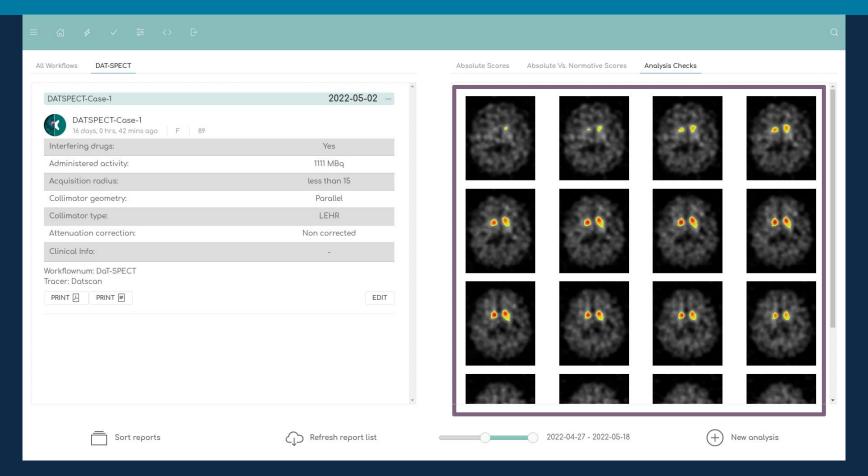






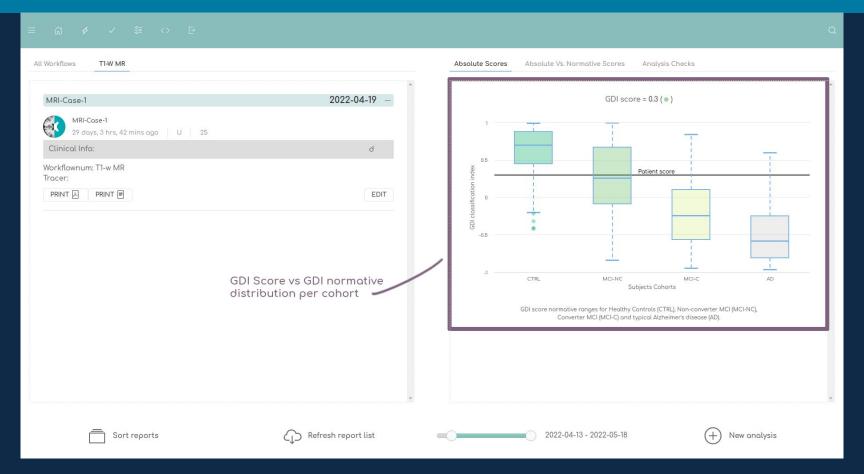






Dolab environment (T1w MRI)





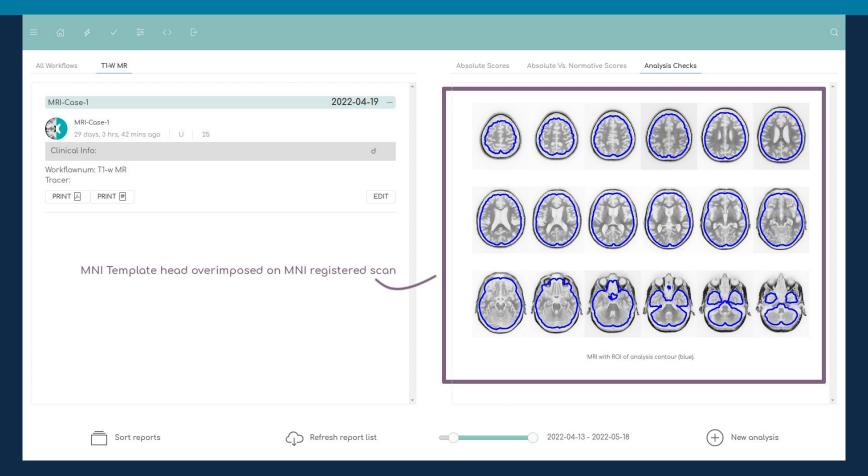
D0lab environment (T1w MRI)





D0lab environment (T1w MRI)



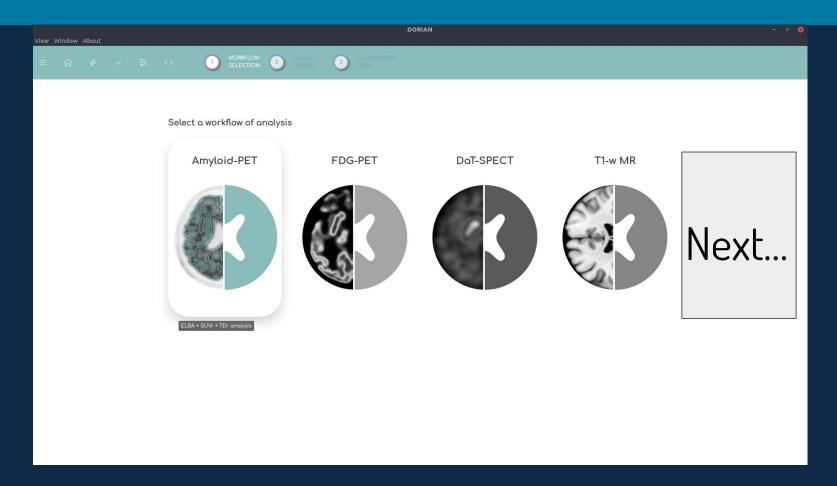




- -Certification
- -Certification
- -Certification...
 - (ISO 13485, ISO 27001, ISO 14971
 - CE mark ((Clinical trial!))

D0lab environment



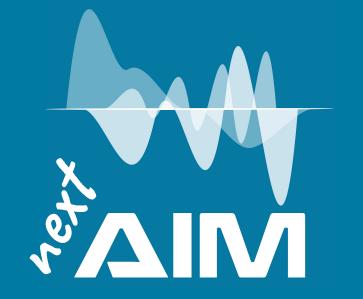


Take home messages



- We developed a tool, already installed and tested in different Italian Hospital, which enables clinicians to
 - -select a desired quantification/classification workflow for neuroimaging applications
 - -upgrade in a secure and GDPR compliant way neuroimages and get quantification reports
 - -keep track of reports (and update his/her own db on multiple devices)
- 2. the system is scalable by design (more requests can be handled by dynamic allocation on cloud resources)
- 3. new workflows can be made available to the users (without software upgrade)
- 4. the workflows can be developed on peculiar programming languages (even in a mixed way) since the calculations are handled through docker instances on farm/cloud

Artificial Intelligence in Medicine



Thank you

Paolo Bosco next_AIM annual meeting 14.02.2023, Milano

