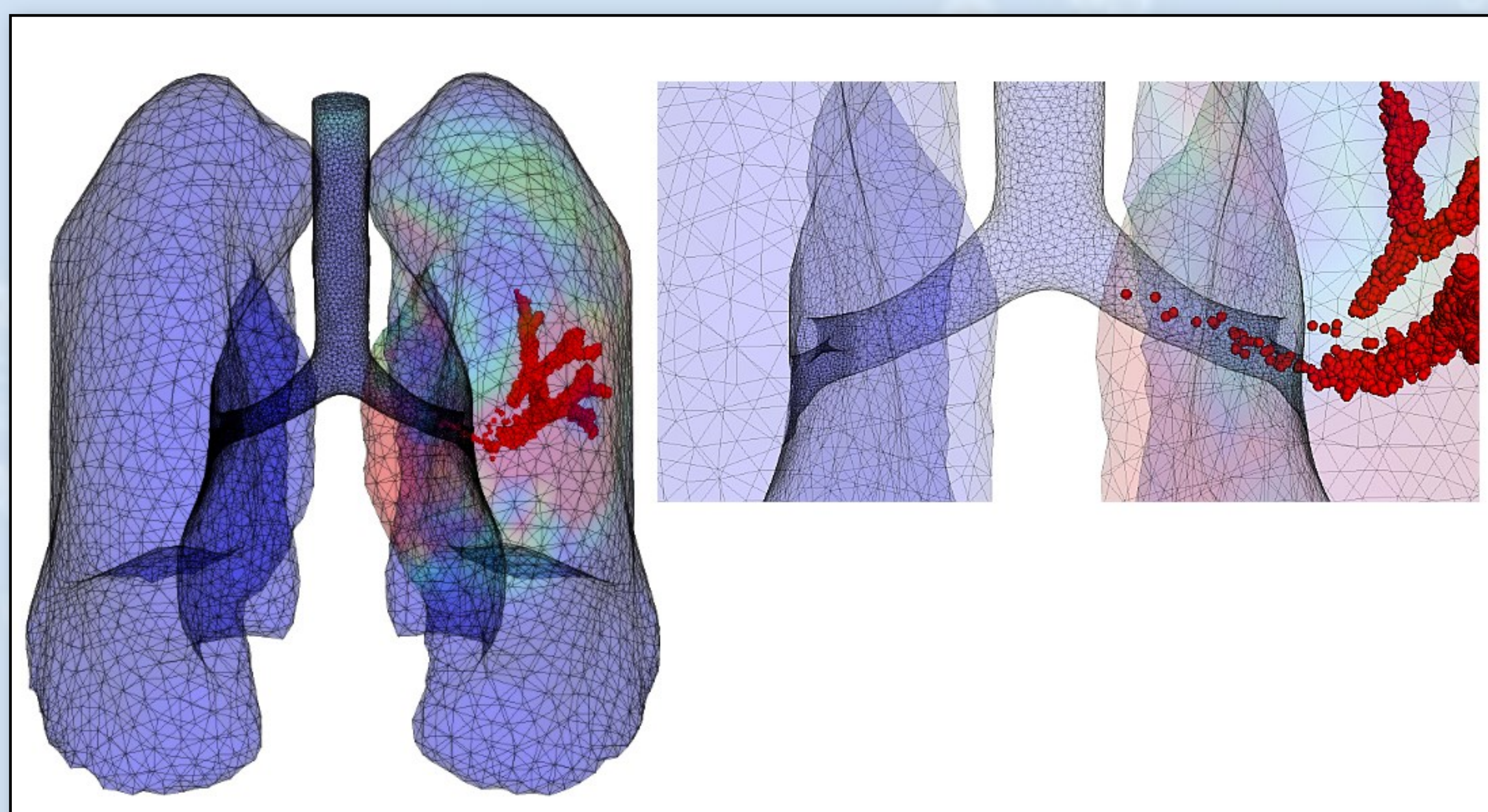


## Use of Regressive Artificial Intelligence (AI) and Machine Learning (ML) Methods in Modelling of COVID-19 spread

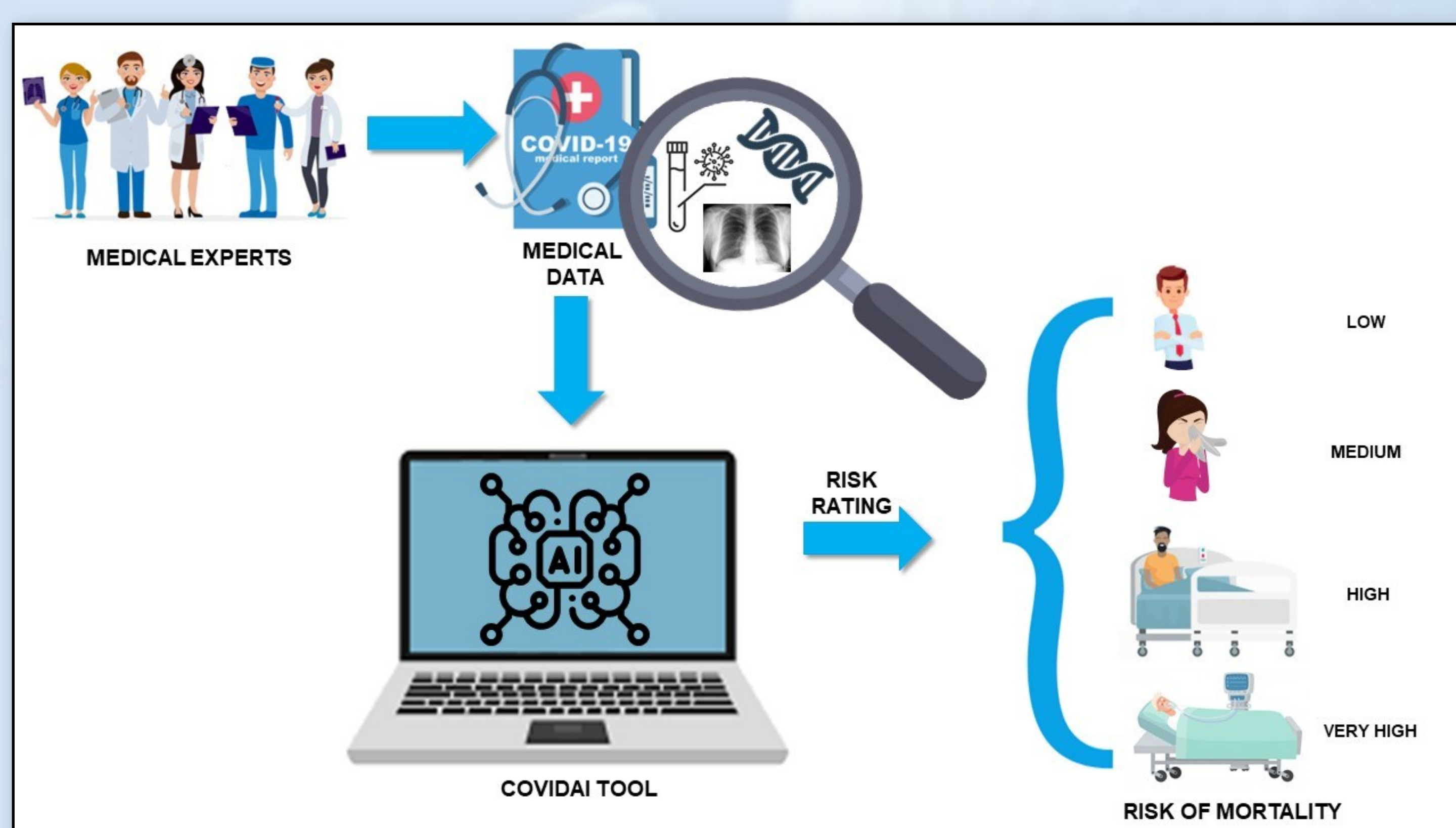
Reference: 305.6019-20

Principal Investigator: prof. dr. sc. Zlatan Car, Researchers: doc. dr. sc. Vedran Mrzljak; Ivan Lorencin, mag. ing. el.; Nikola Anđelić, mag. ing. mech.; Sandi Baressi Šegota, mag. ing. comp.; Jelena Musulin, mag. ing. el.; Daniel Štifanić, mag. ing. el.

In March 2020, The World Health Organization (WHO) announced the pandemic disease caused by SARS-CoV-2 (COVID-19) and brought measures in order to interrupt the spread of SARS-CoV2 worldwide. Understanding the transmission dynamics of infectious diseases in populations, regions and countries will contribute to better approaches to reducing the spread of these diseases.

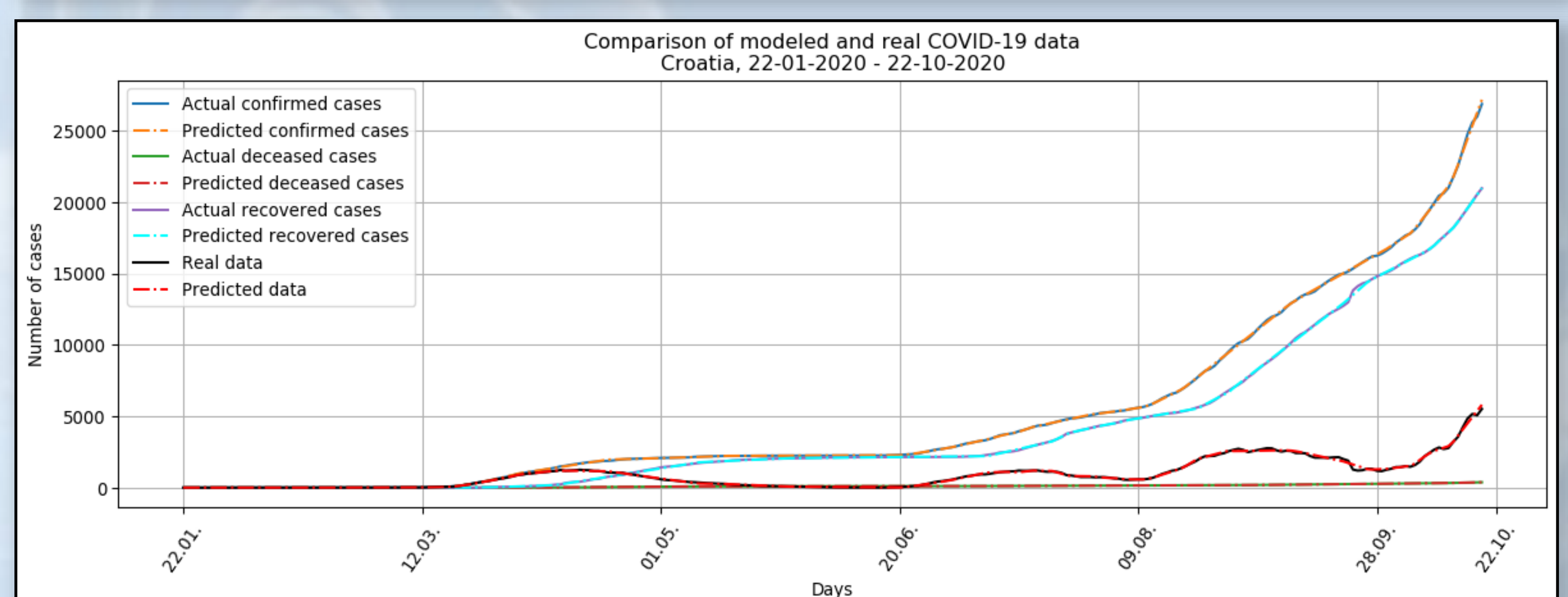
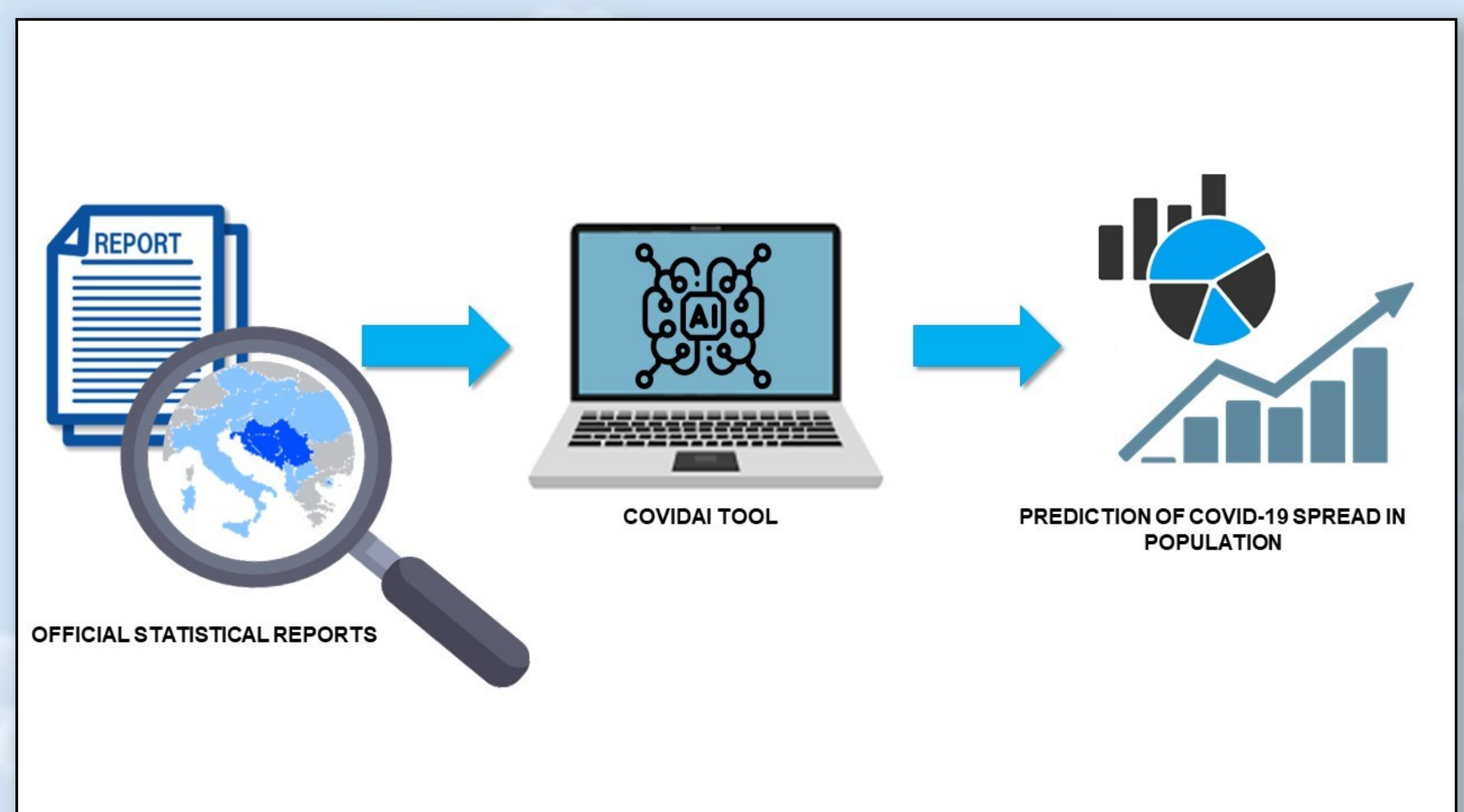


COVIDAI tool would help medical experts to decide whether the patient will be subjected to further analysis and prescribe adequate therapy. Predictive models based on machine learning can provide useful data in terms of prediction of epidemiological events, which can save time for timely and optimal response of both the health system and the society.



Main activities performed within the COVIDAI project include development of two models:

1. Personalized AI model for COVID-19 prediction (monitoring of patient's condition and prediction of disease progress in time)
2. Epidemiological model for COVID-19 (monitoring of number of people susceptible/exposed/infected/dead/recovered from COVID-19)



### Publications:

N. Anđelić, S. Baressi Šegota, I. Lorencin, V. Mrzljak, Z. Car (Forthcoming). Estimation of COVID-19 Epidemic Curves Using Genetic Programming Algorithm. Health Informatics Journal, SAGE Publications, ISBN: 1460-4582 (journal article, accepted for publication on 6.11.2020.)

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