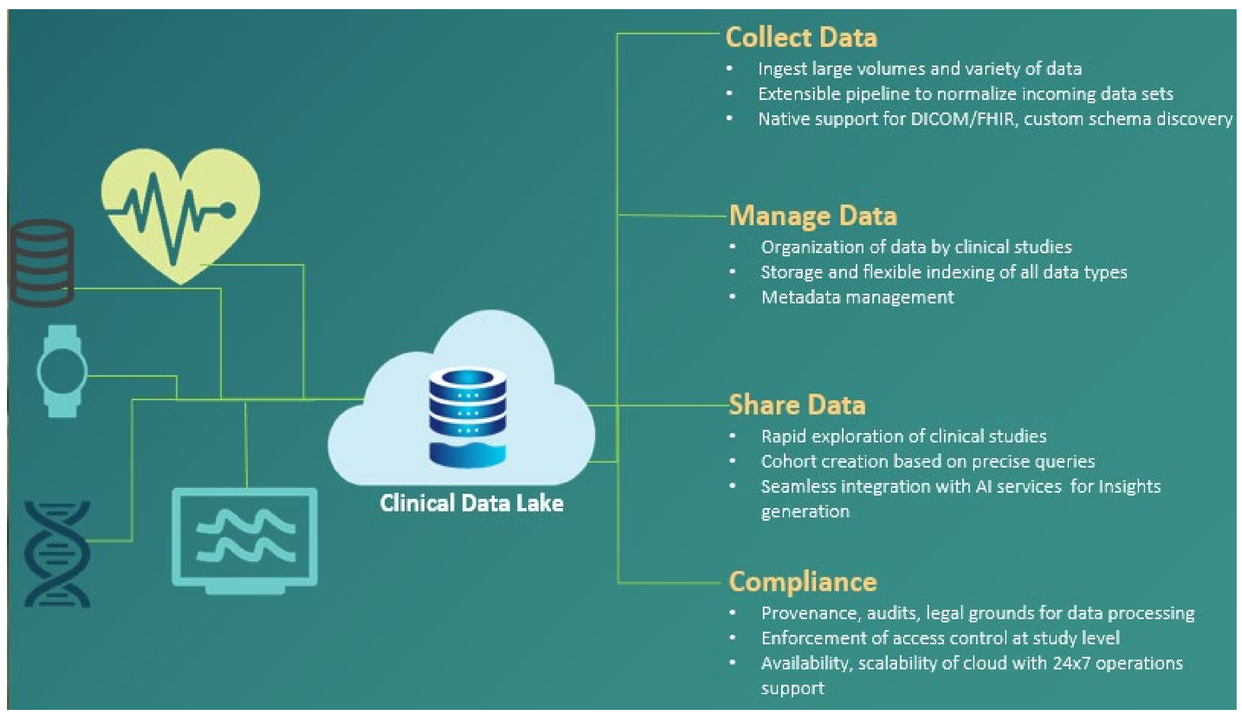
Philips Clinical Data Lake use case: the ReIMAGINE study

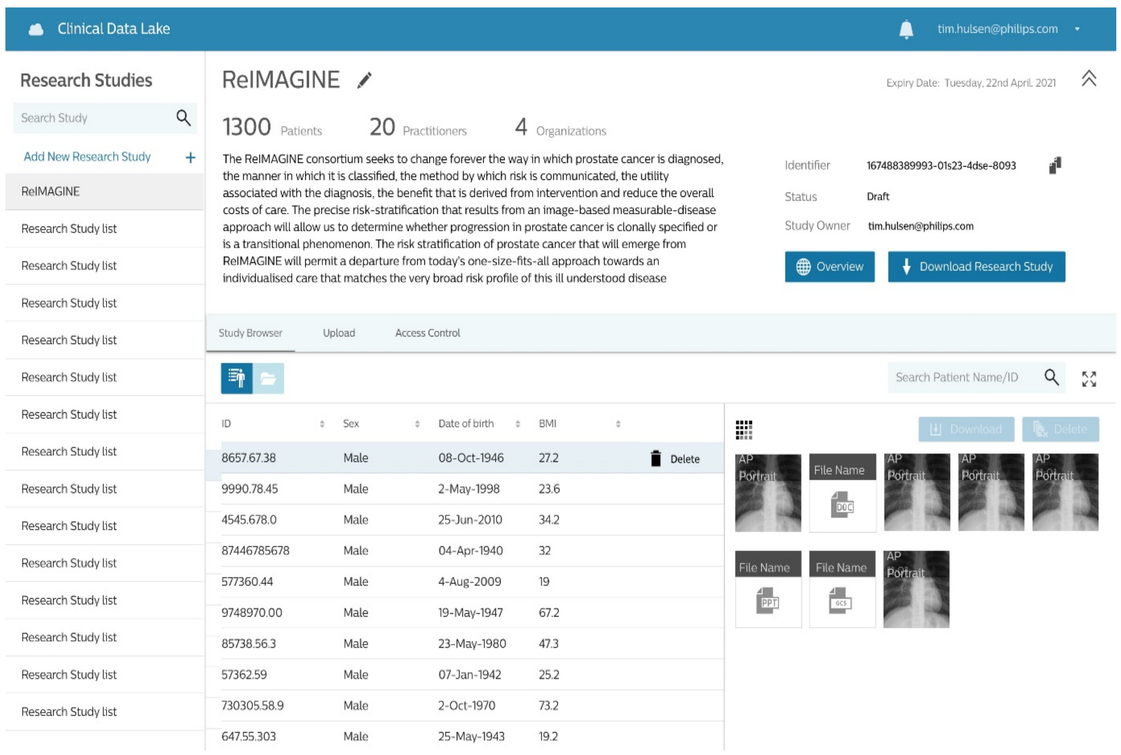
Tim Hulsen[1], Jenson Davis[2], Aida Santaolalla[3], Mark Emberton[4], Neil McCartan[5], Ton Coolen[6], Mieke Van Hemelrijck[3] on behalf of the ReIMAGINE Study Group

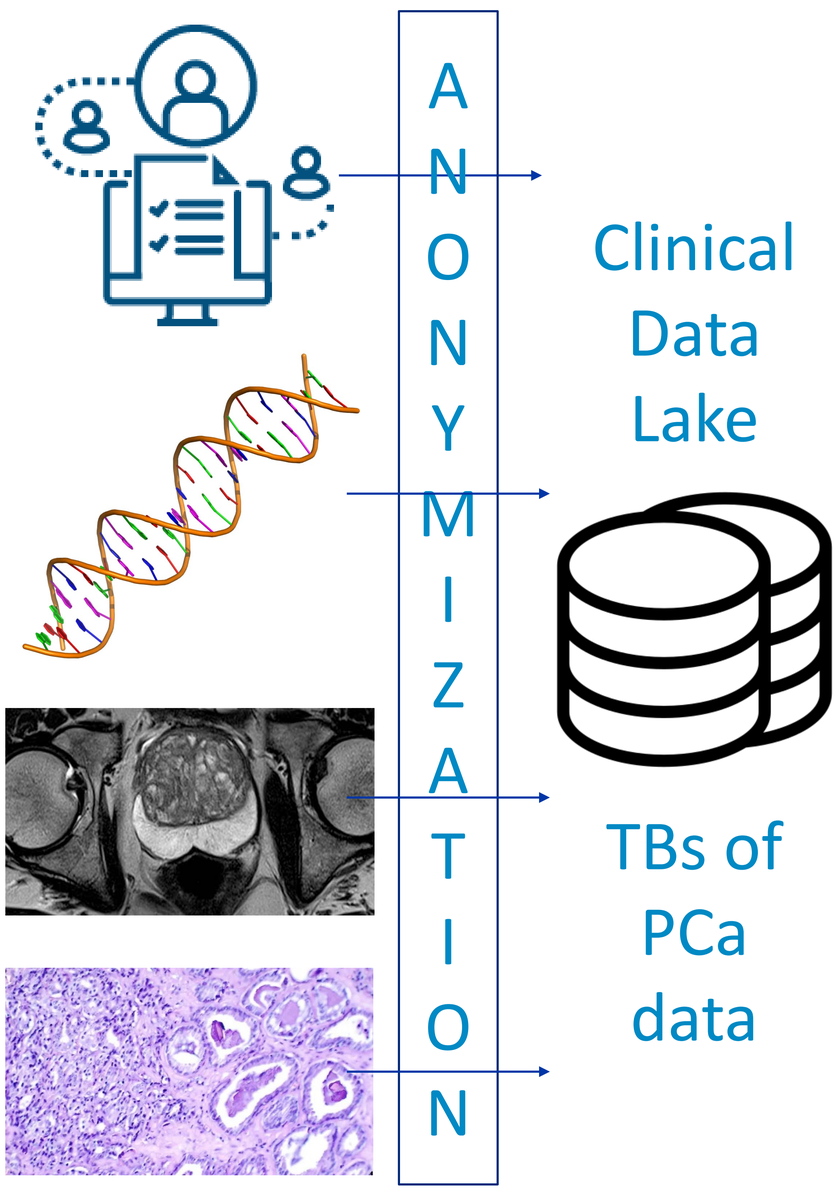
[1]Philips Research, Dept. of Hospital Services & Informatics, Eindhoven, The Netherlands
[2]Philips HealthSuite Platforms, Data Science Services, Best, The Netherlands
[3]King's College London, Translational Oncology and Urology Research (TOUR), London, United Kingdom
[4]University College London, Dept. of Urology, London, United Kingdom
[5]University College London, Research Dept. of Targeted Intervention, London, United Kingdom
[6]London Institute for Mathematical Sciences (LIMS), LIMS, London, United Kingdom

Clinical Data Lake

The HealthSuite Clinical Data Lake (CDL) is a solution purpose-built for healthcare to collect, manage and share clinical data at scale, accelerating collaborative data-driven research and innovation.







ReIMAGINE

One of the first studies to run on CDL, is ReIMAGINE (https://www.reimagine-pca.org). The ReIMAGINE Consortium will determine the optimum use of multiparametric MRI as a novel risk stratification tool for prostate cancer (PCa) diagnosis, together with the evaluation of other potential risk scores utilizing multimodal data. The consortium includes academic partners (University College London, King's College London, Imperial College, London Institute for Mathematical Sciences) as well as commercial partners (Philips a.o.). Two concurrent work strands (WS) will ensure that detailed clinical, pathological, omics and imaging data will be recorded for 1000 men referred with suspected PCa (WS1) and 300 men recruited from the community for PCa screening (WS2). The information from both WS will be integrated using CDL. Baseline blood, urine, fresh prostate tissue samples, digital pathology and radiomics data will be analysed. Data output will be stored with correlated mpMRI disease endotypes and linked with long term follow-up outcomes. CDL will support the deployment of Interpretable Artificial Intelligence (IAI) and Bayesian inference methods for rapid and scalable risk stratification of PCa.

Are you interested in the Health Data Portal? Or would you like to receive more information about this project? Then please connect with our Philips representative at our virtual booth: https://app.networkapp.com/events/10181/sponsor/36596

The ReIMAGINE study was launched with funding of £4.1m from the Medical Research Council and £1m from Cancer Research UK, as part of the MRC's Stratified Medicine Initiative.

Please contact tim.hulsen@philips.com if you have any questions about this poster. See for more info: https://www.hsdp.io and https://www.reimagine-pca.org