Digital twinning for enhancing breast cancer surgery
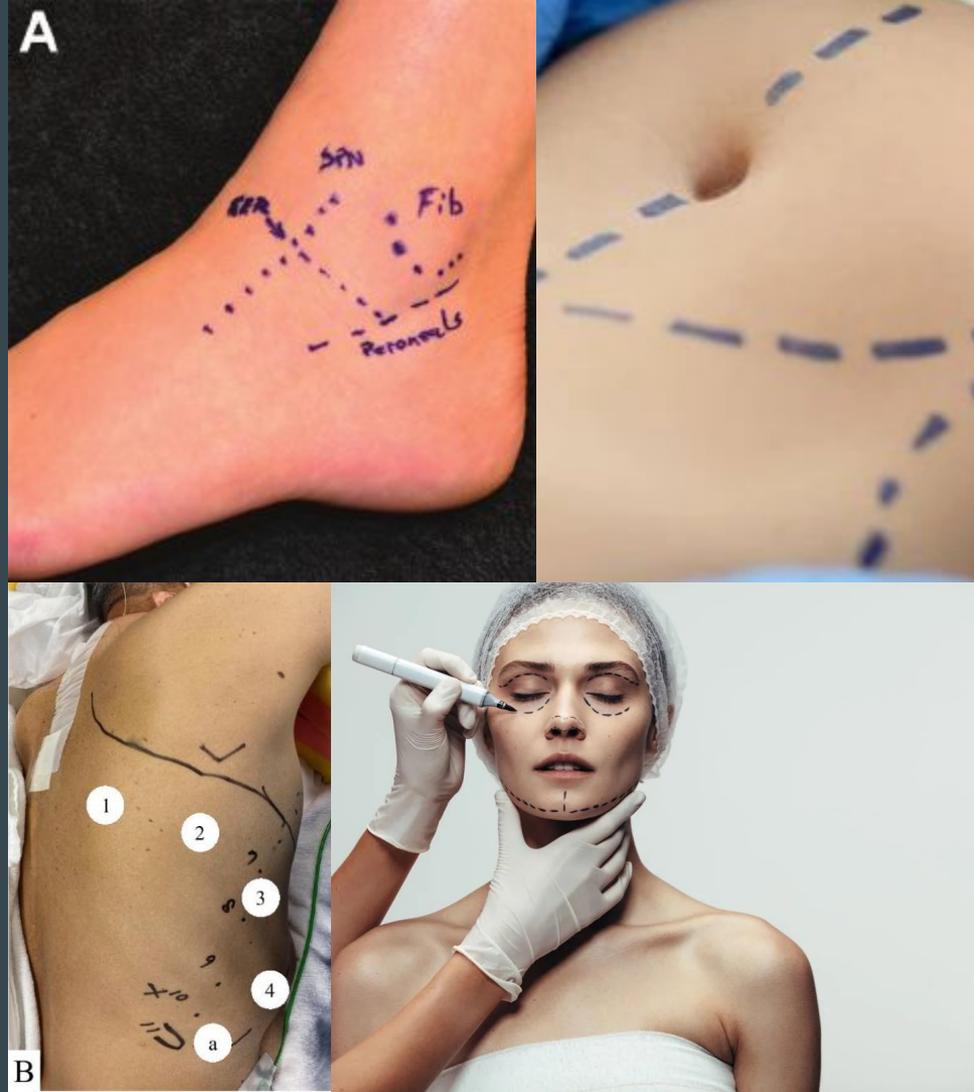
...

Arnaud Mazier

University of Luxembourg & AnatoScope
22/03/2022
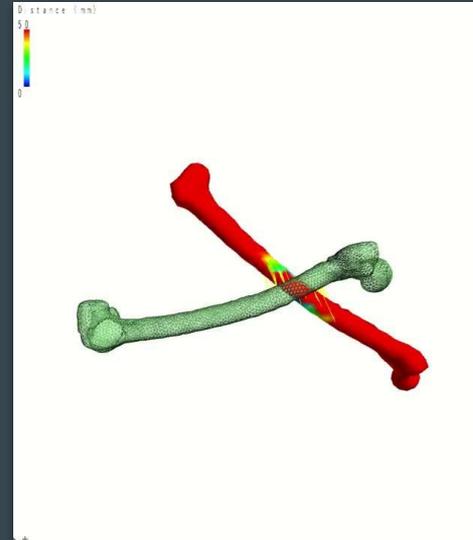
Preoperative surgical drawing

- Landmarks or visual map

- Highly affect the operation success
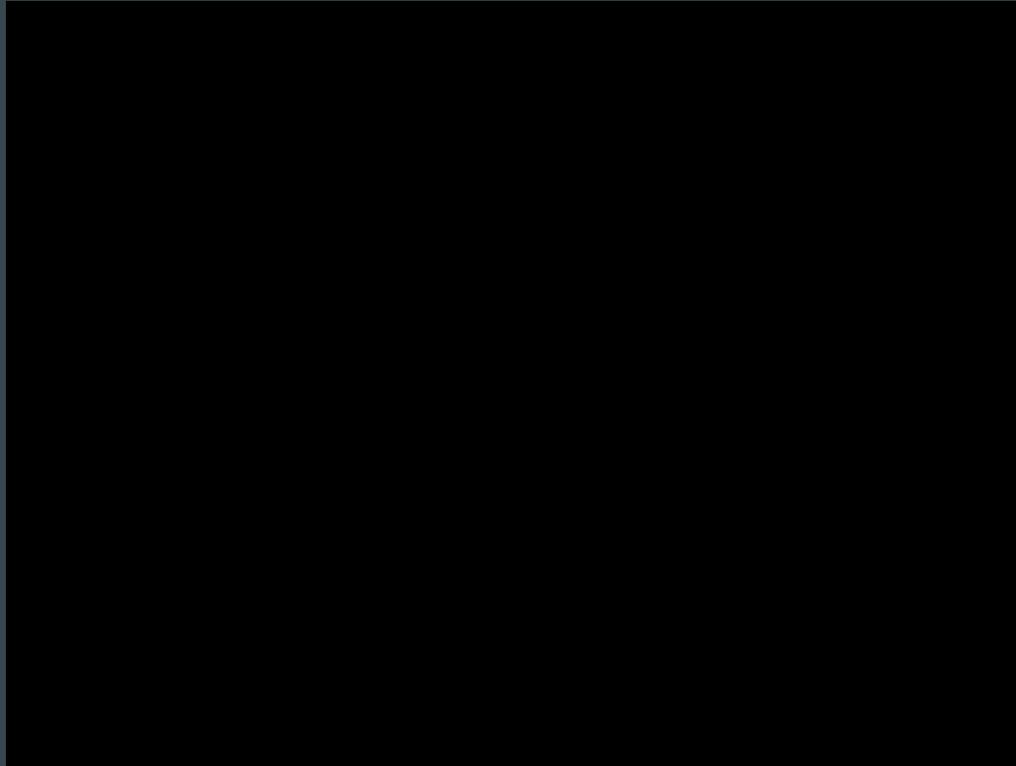
- Time-consuming

- Challenging

Digital twinning

Data acquisition

Registration

Patient-specific model

Patient-specific model
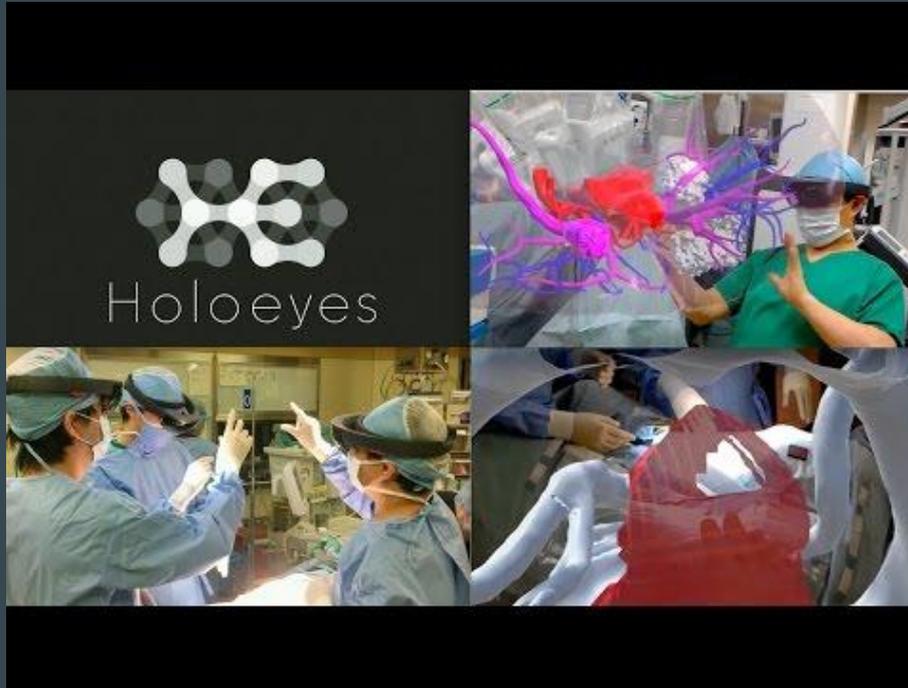
Fast

Every simulation takes less than 3 seconds

Accurate

The mean error is prior to 2.4 mm for the surface and 8.4 mm for the landmarks

Flexible

The method can easily covered different surgeries and body parts

Video: https://www.youtube.com/watch?v=l2QpKmDRnUA

One step in the future

Thank you

Any questions ?

Reference: A. Mazier, S. Ribes, B. Gilles, S.P.A. Bordas, A rigged model of the breast for preoperative surgical planning. DOI: 10.1016/j.jbiomech.2021.110645