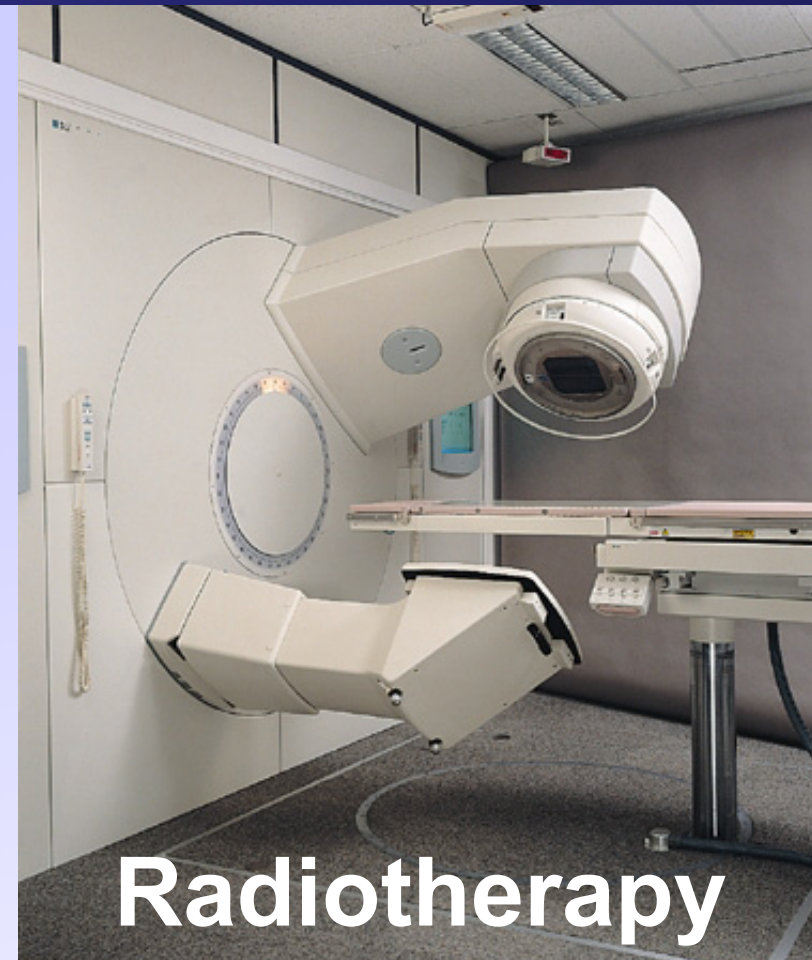




# Approach to simulate lung tumour displacements with mass/spring system

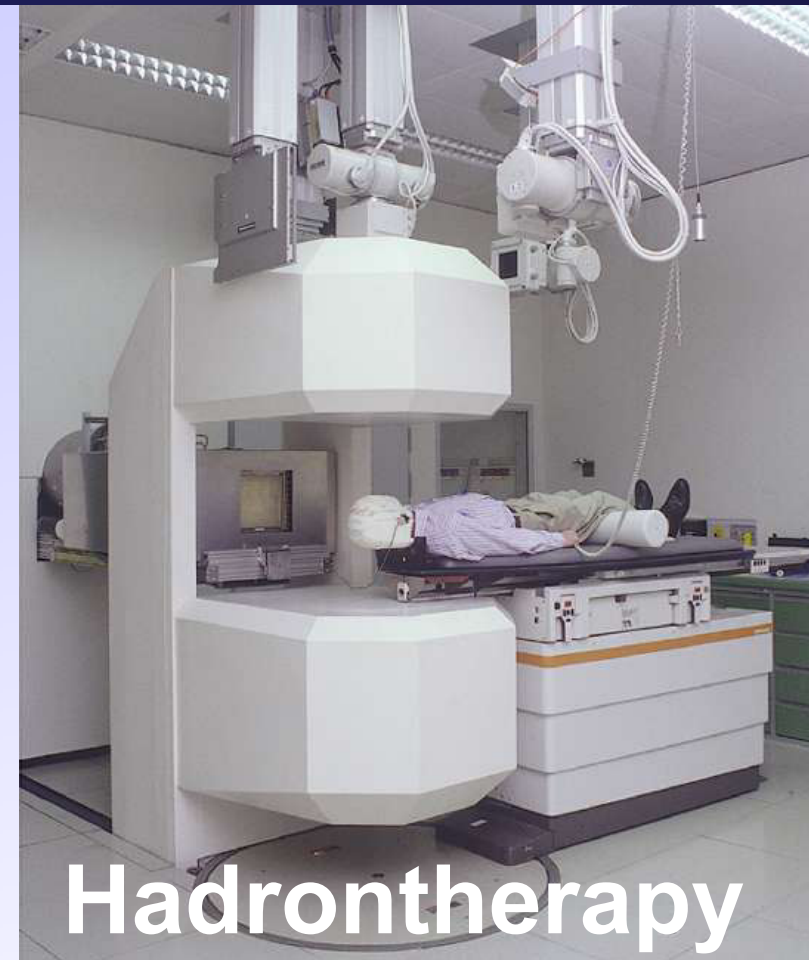
V. Baudet, F. Jaillet, B. Shariat, P.F. Villard, M. Beuve, J.Y. Bayle, T. Quesnel, C. Ginestet, S. Clippe, C. Carrie  
[vincent.baudet , fabrice.jaillet , bezhad.shariat]@liris.cnrs.fr

## Context



Radiotherapy

X ray



Hadrontherapy

Ions (GSI)

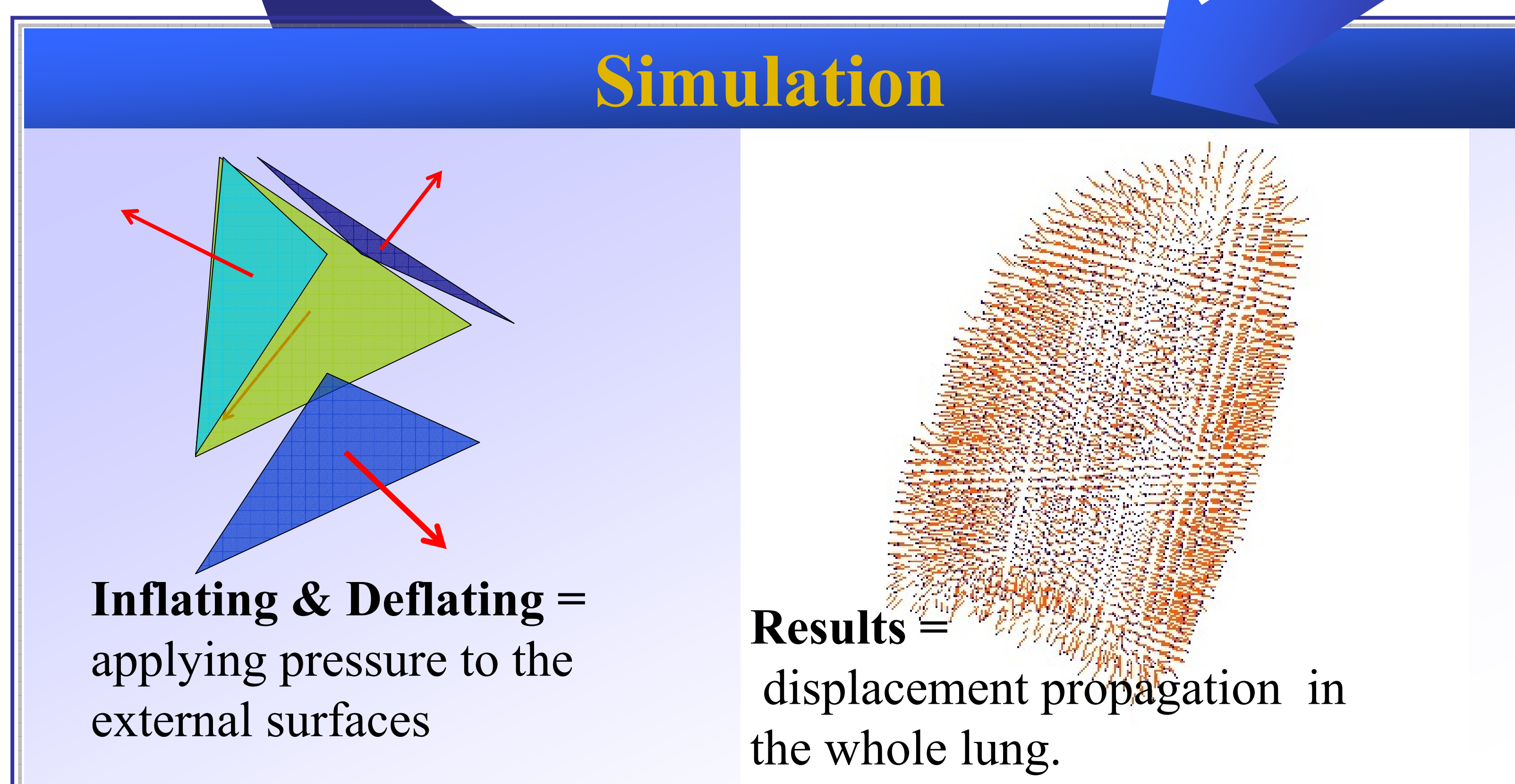
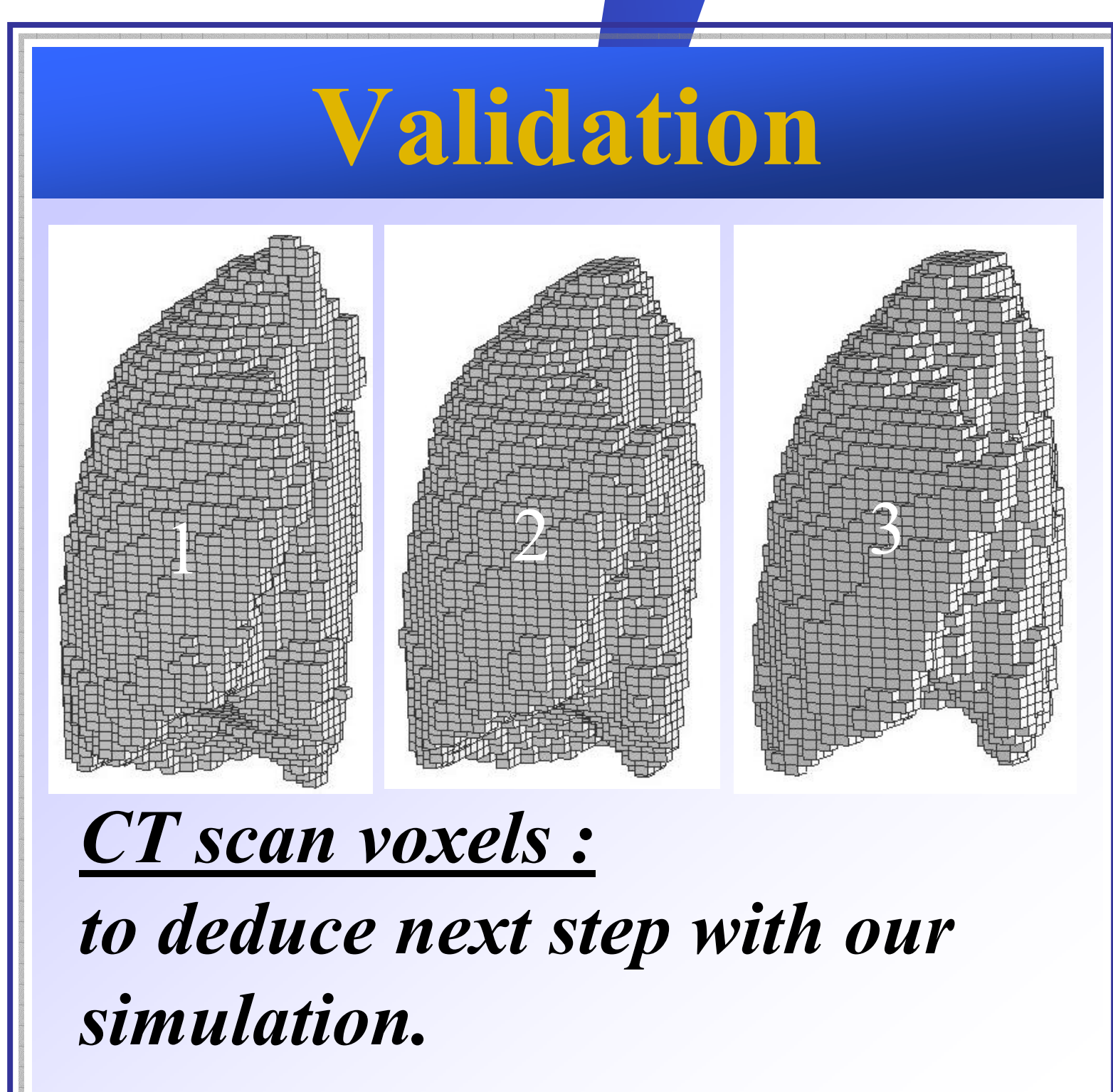
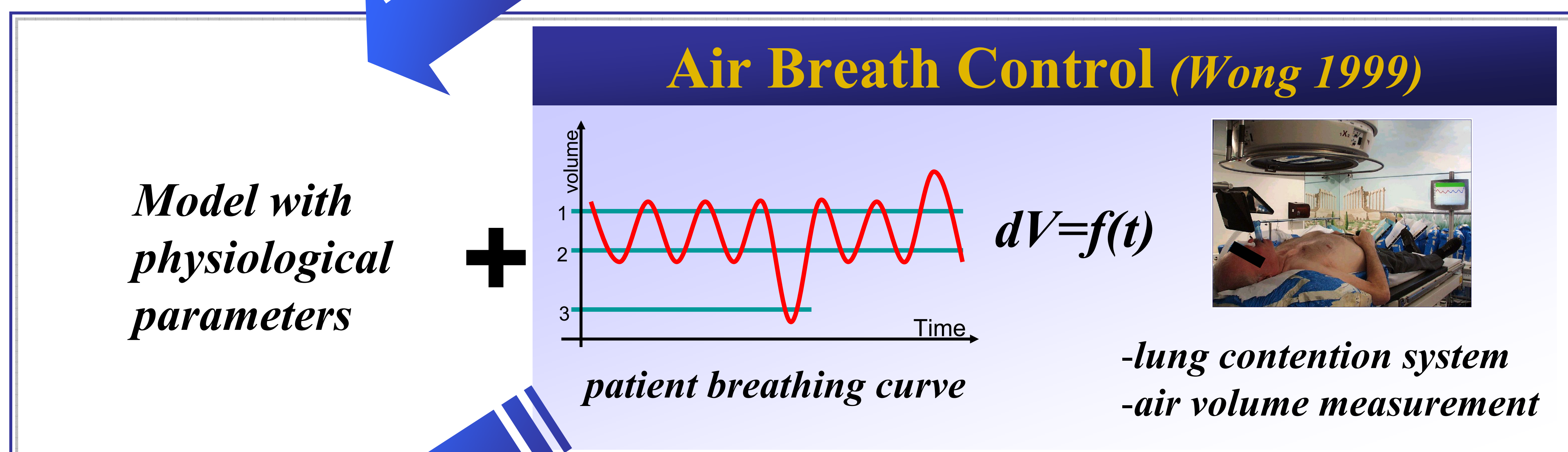
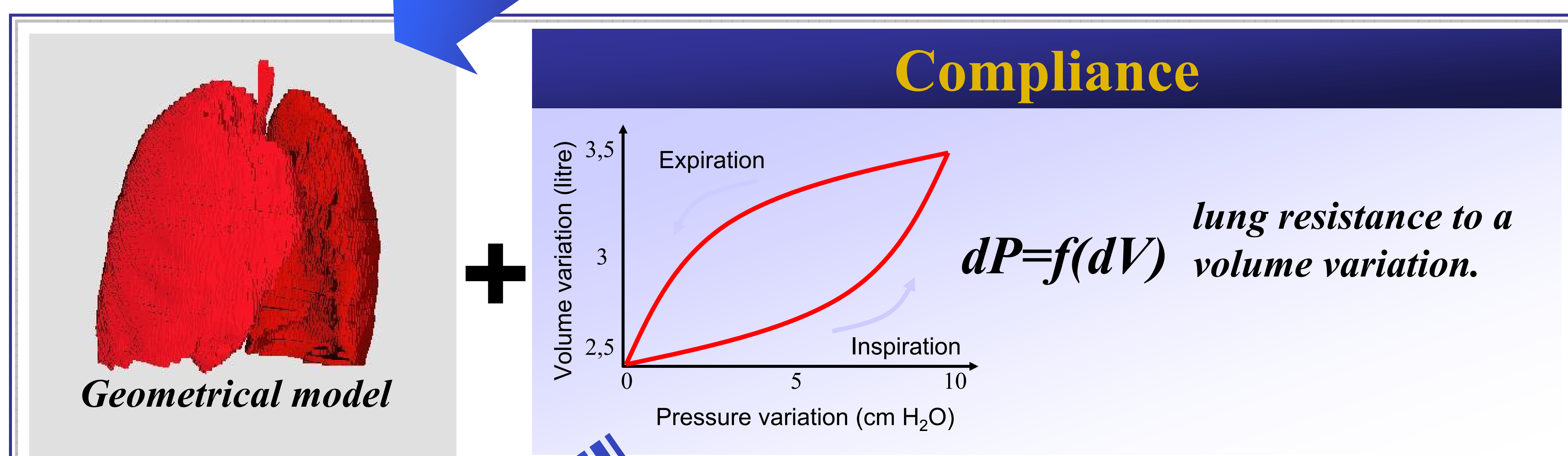
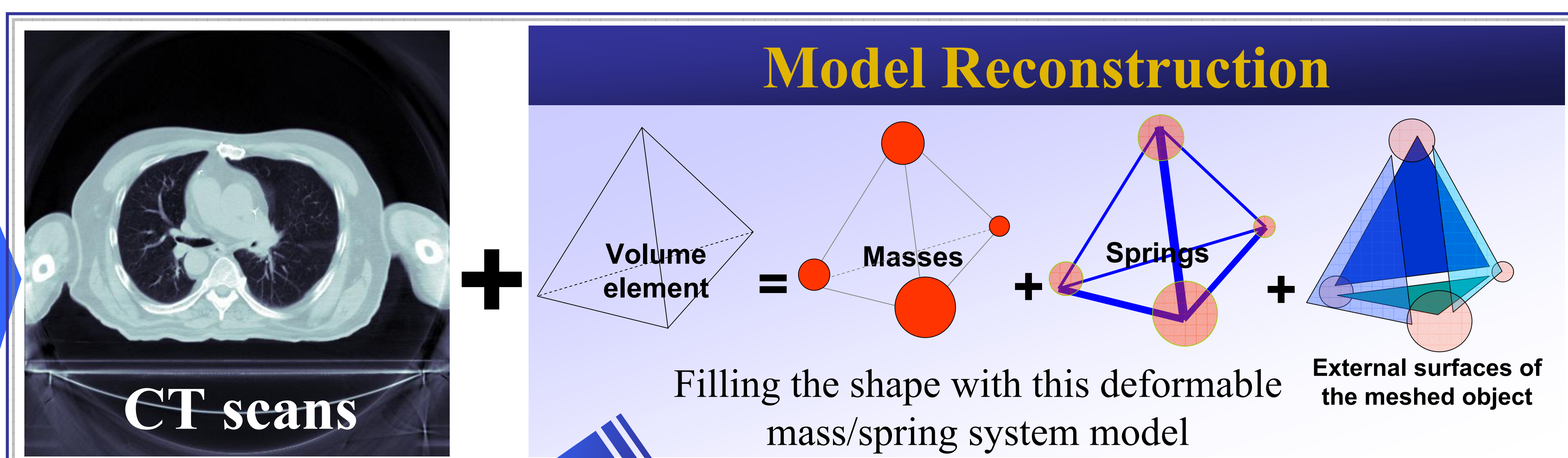
## Aim

Predict tumour displacements and deformations for cancer treatment, using a patient's personalised mechanical model.

## Proposal

Model of a mass / spring system customised by physiological and geometrical data.

## Process



## Future work

- modelling at higher resolutions
- handling the lung environment (diaphragm, heart, rib cage...)
- adding anisotropy and heterogeneity
- targeting of the tumour