i-MEET

NEXT GENERATION

Multidisciplinary European Endovascular Therapy

News from Imaging and 3D Printing for Aortic Disease

L. Maene

Disclosure of Interest

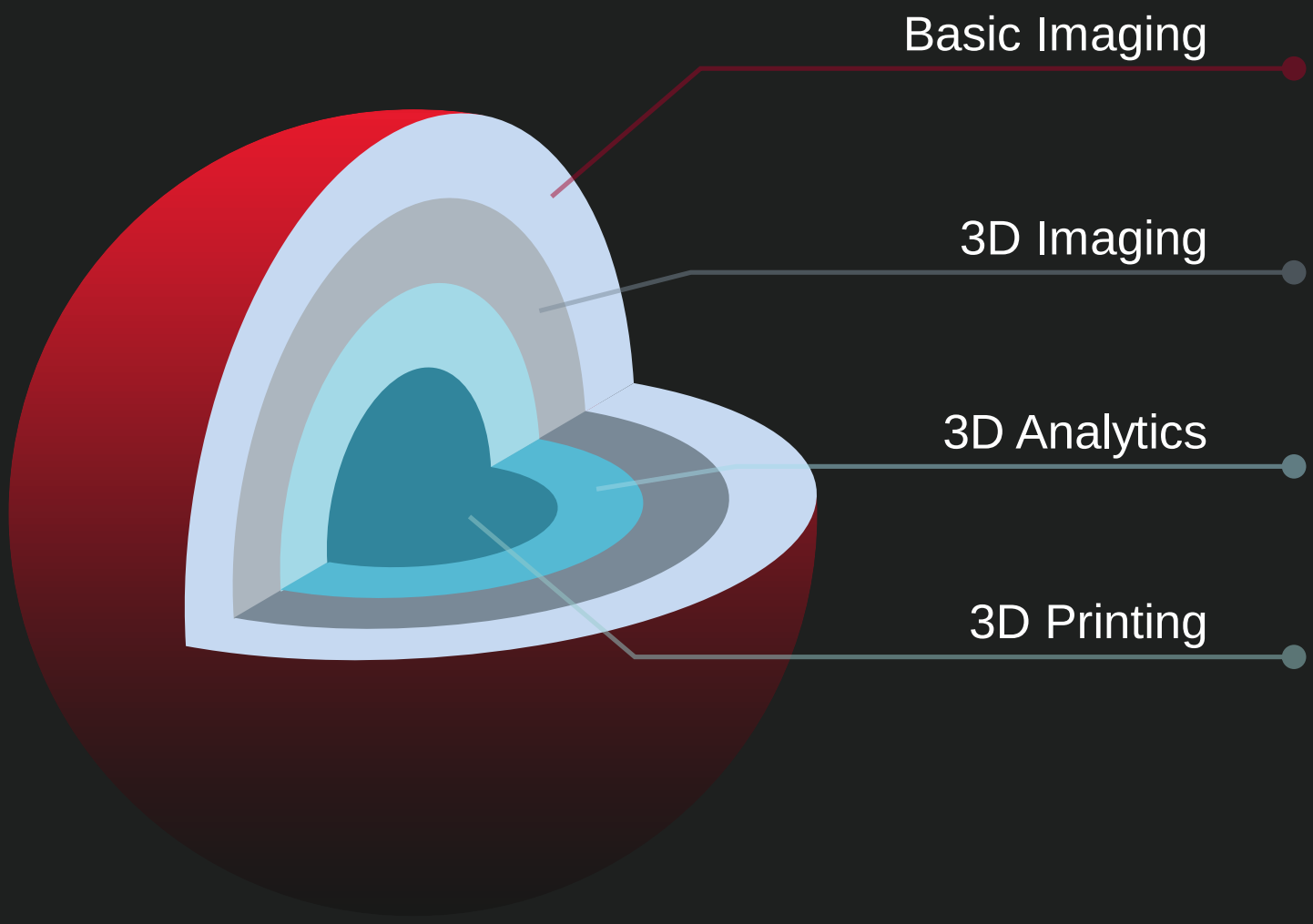
Speaker name: ..... L. Maene .....

I have the following potential conflicts of interest to report:

- ✓ Consulting
- ❑ Employment in industry
- ❑ Shareholder in a healthcare company
- ❑ Owner of a healthcare company
- ❑ Other(s)

- ❑ I do not have any potential conflict of interest

Imaging & Aortic disease



That moment …

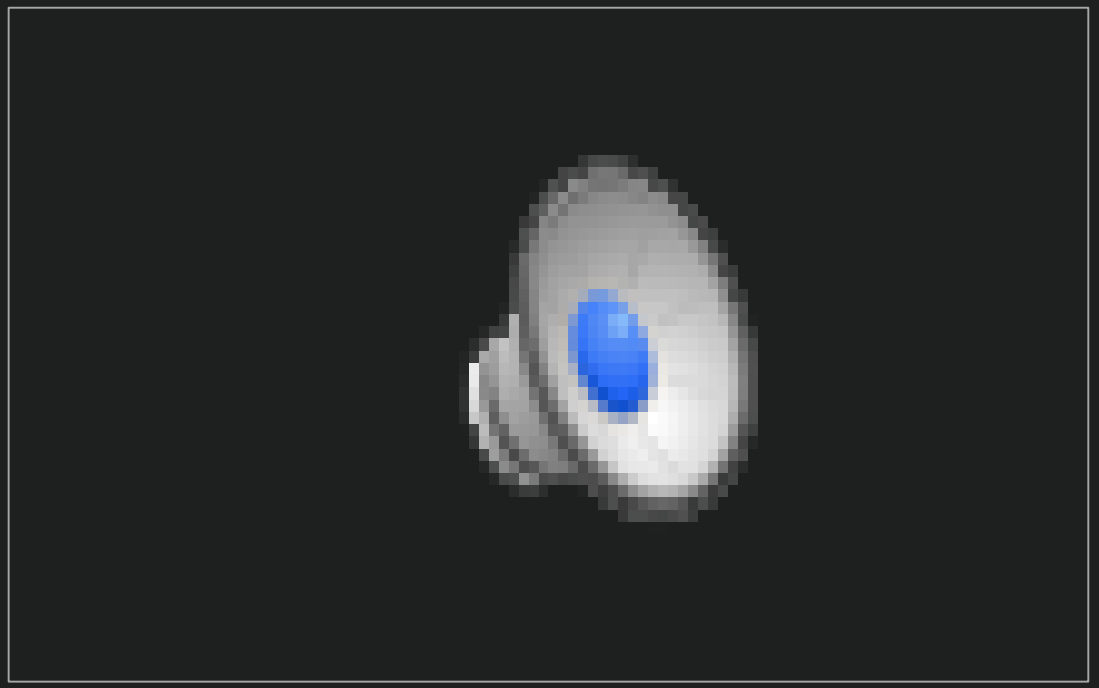
when you realize it’s not a chair…

3D Imaging …

- Segmentation & Volume Rendering

3D Imaging 2016

- Segmentation & Volume rendering
  - Easy
  - Fast
  - Reliable
  - All sources

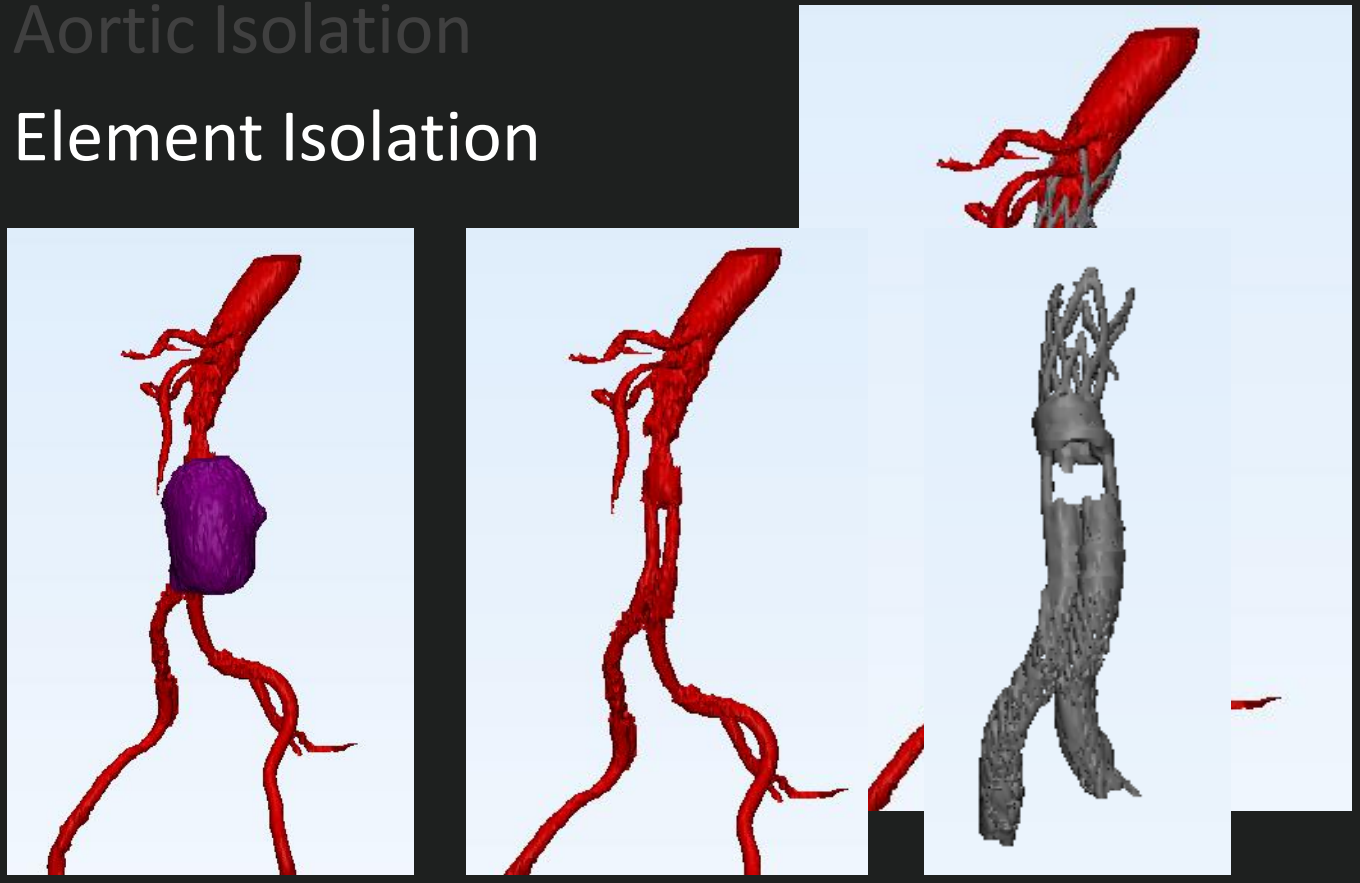


3D Imaging 2016

- Segmentation & Volume rendering
  - Aortic Isolation
    - Flow Lumen
    - Aneurysm sac
    - Ca++
    - Endoleaks

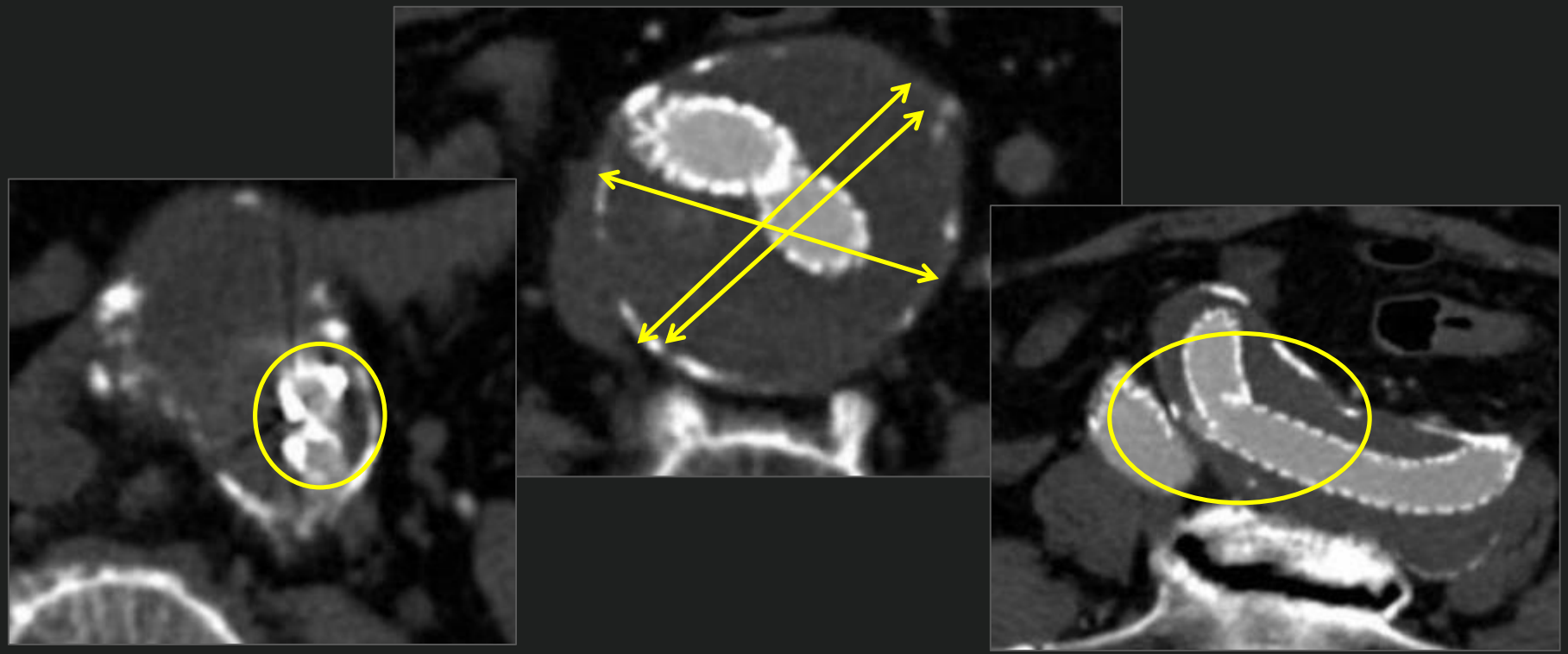
3D Imaging 2016

- Segmentation & Volume rendering
  - Aortic Isolation
  - Element Isolation



3D Analytics 2016

- Segmentation & Volume rendering
  - Changing Configuration / Morphology



3D Analytics 2016

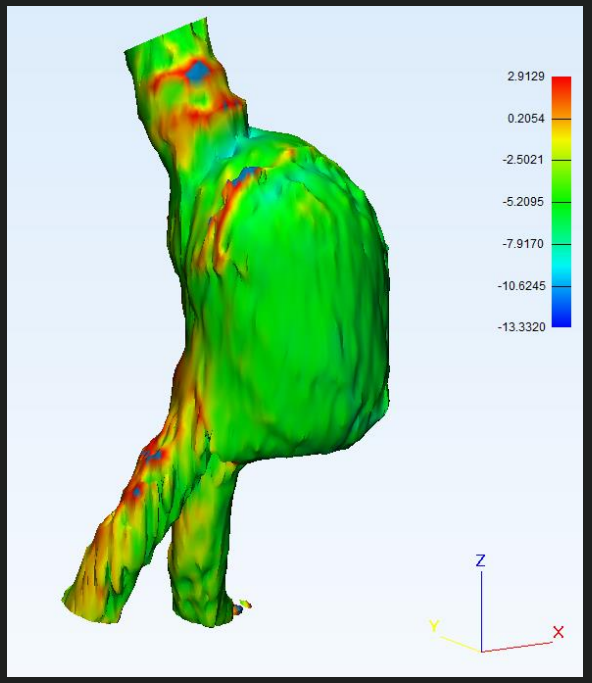
- Segmentation & Volume rendering
  - Changing Configuration / Morphology

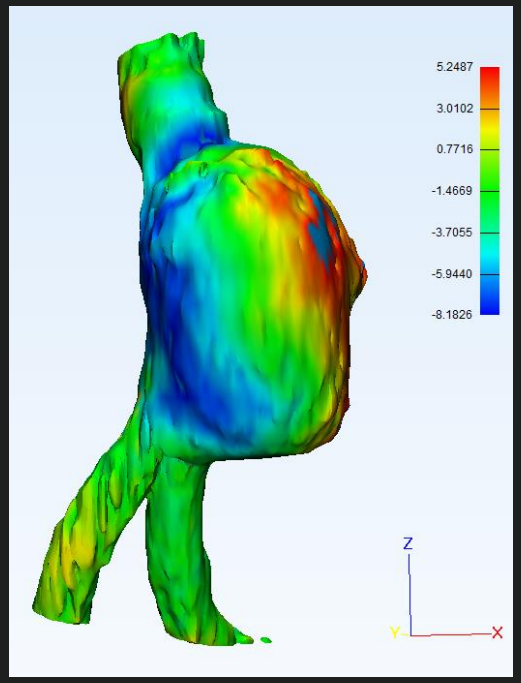
2013 :
- Flow
- Graft

2015 :
- Flow
- Graft

3D Analytics 2016

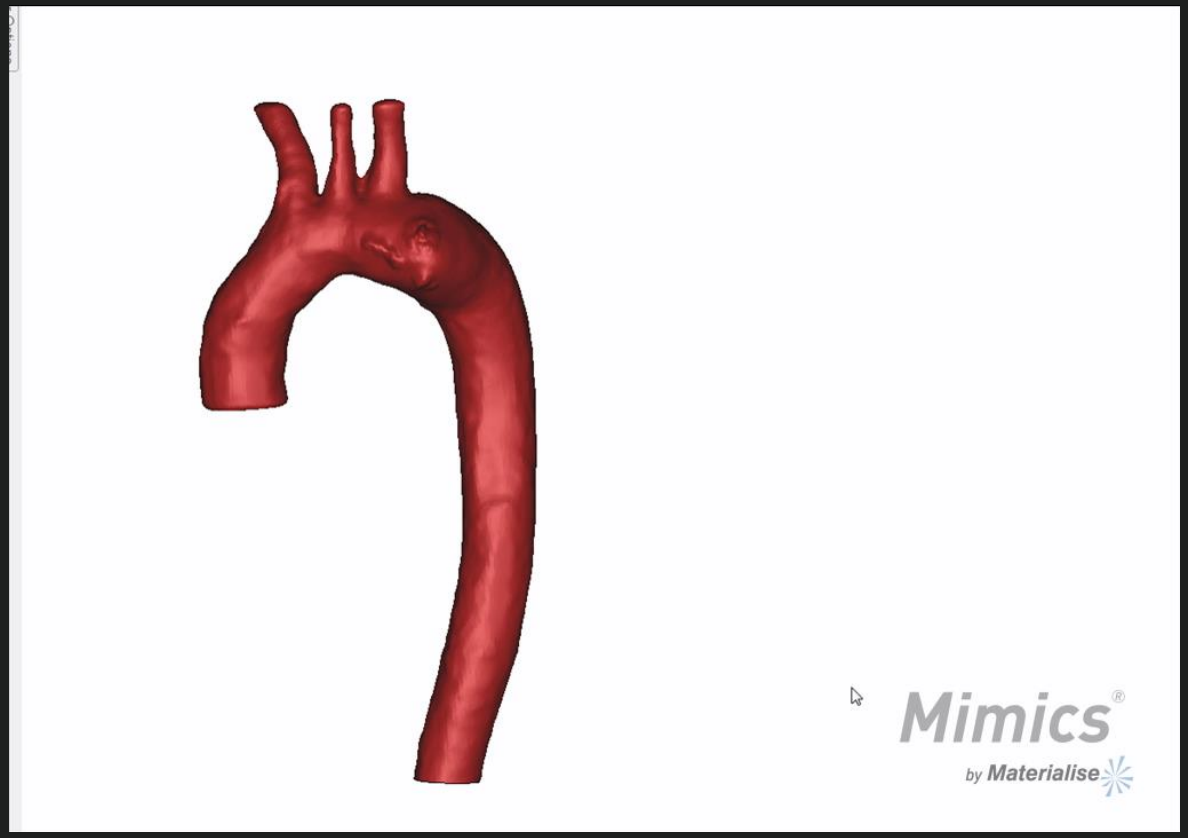
- Segmentation & Volume rendering
  - Aneurysm Volume Analysis (post implant → 2Y FU)





3D Analytics 2016

- 3D Pre-Operative Graft Planning : Prototype



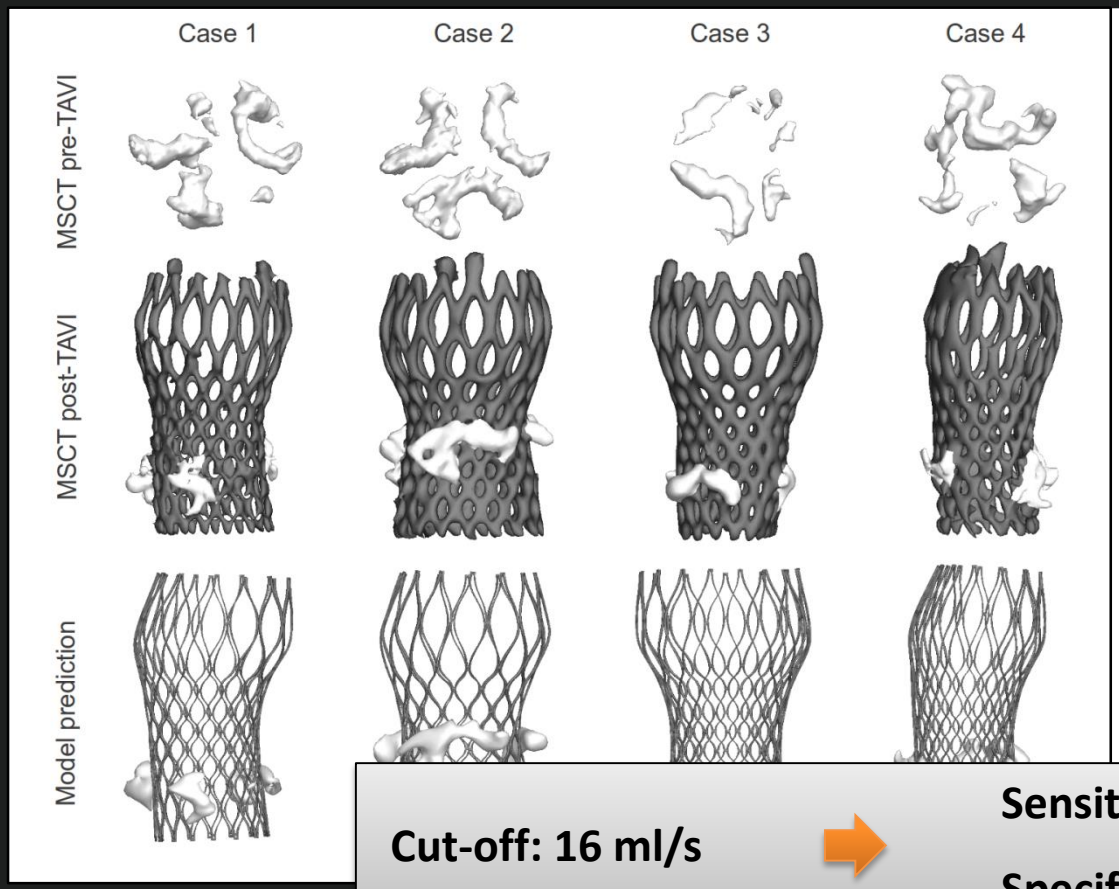
3D Analytics 2016

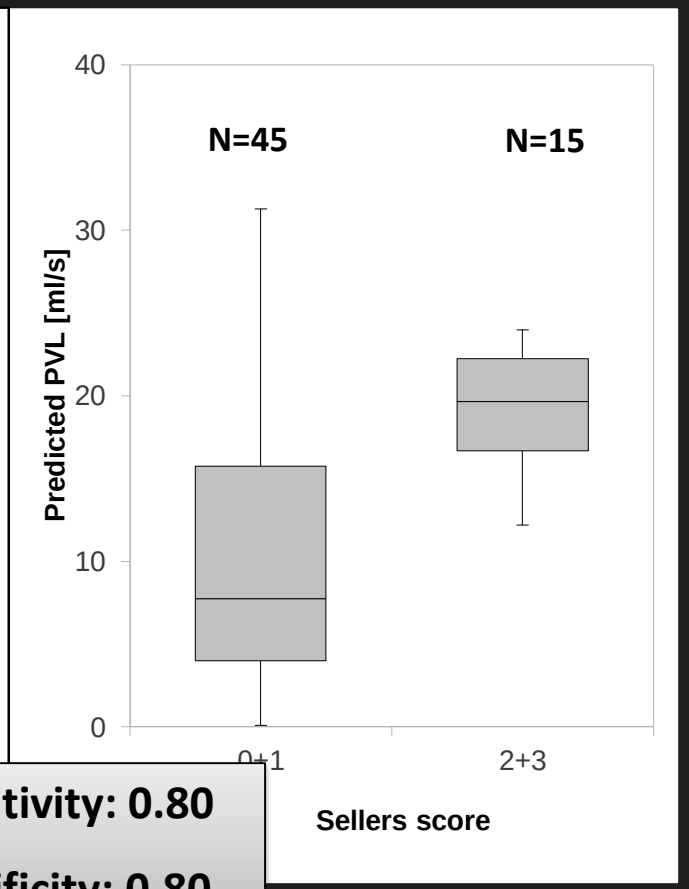
- 3D Pre-Operative Planning TAVI :

  Validated Physics based simulation

3D Analytics 2016

- 3D Pre-Operative Planning TAVI : Validation





Cut-off: 16 ml/s

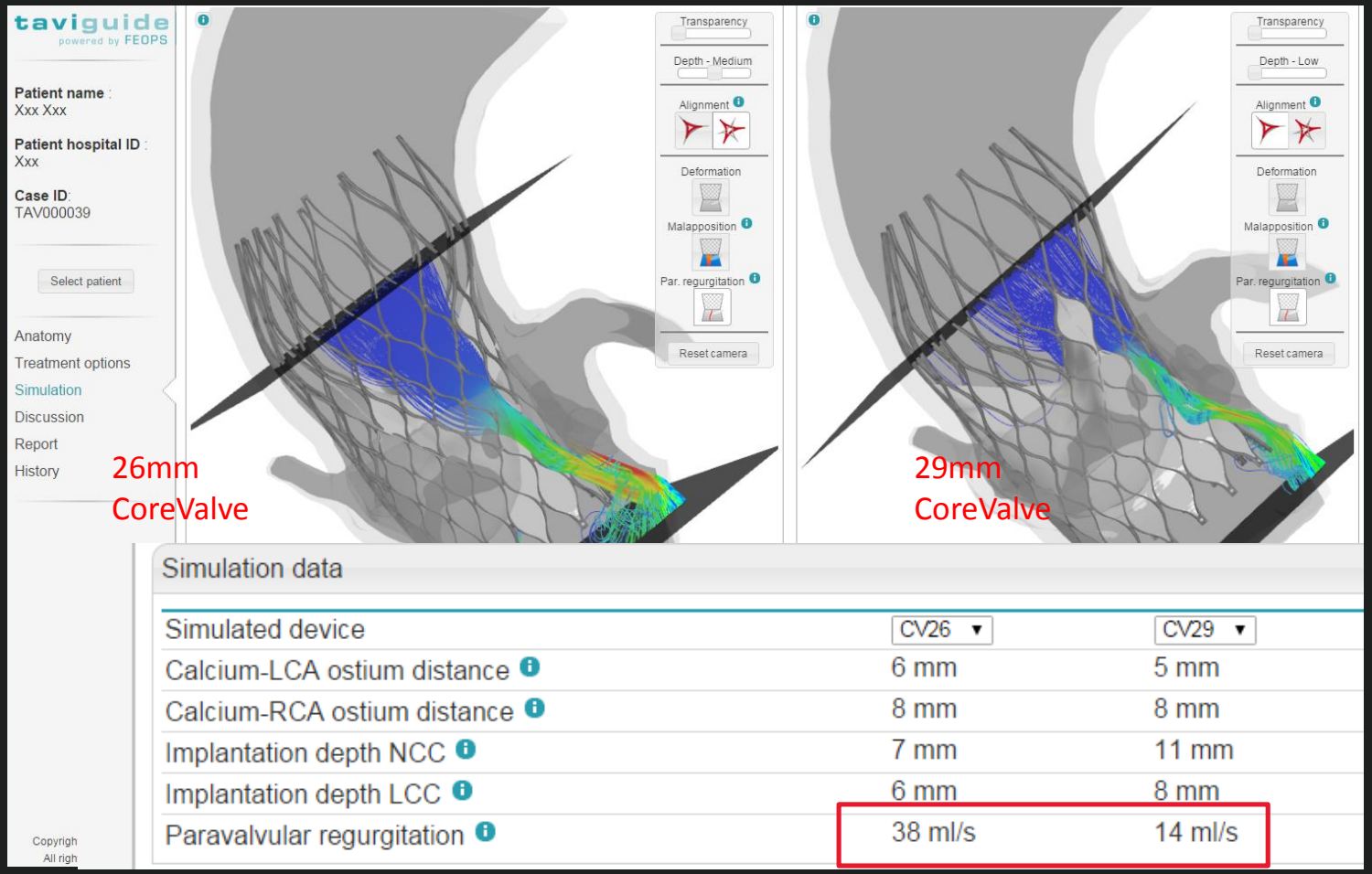
Sensitivity: 0.80

Specificity: 0.80

et al, JACC Card Int 9, 2016

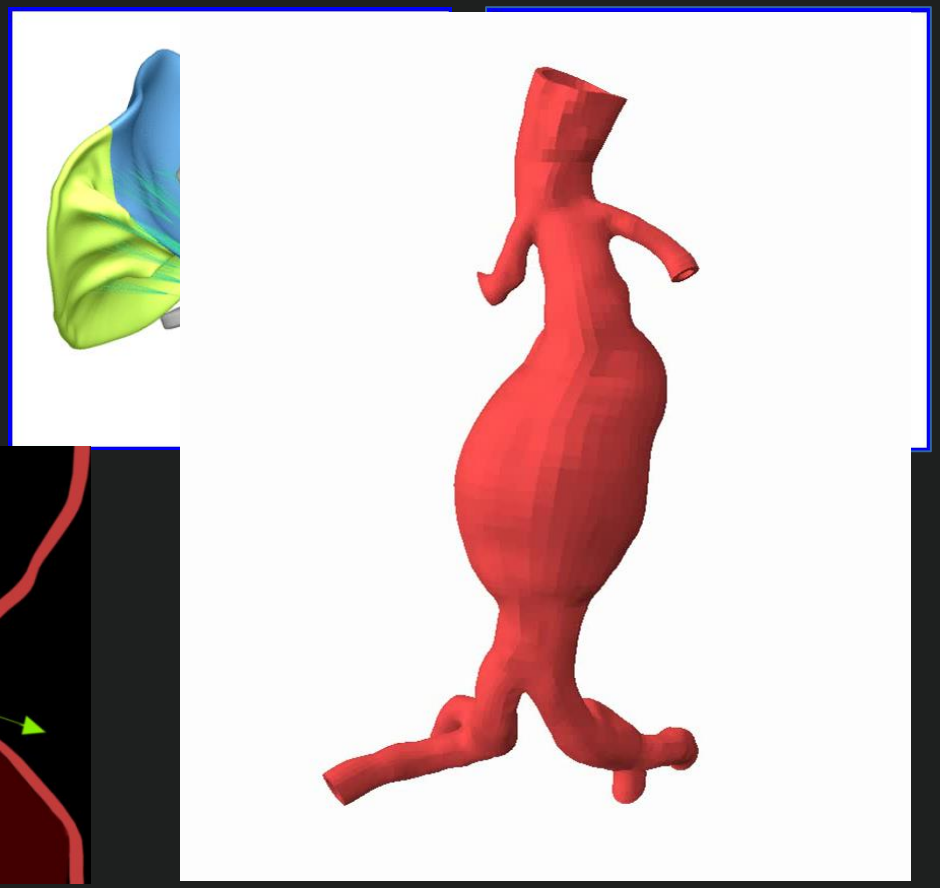
3D Analytics 2016

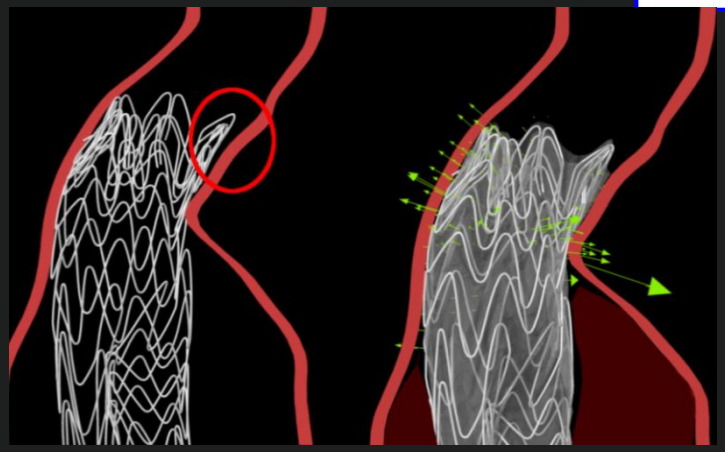
- 3D Pre-Operative VIRTUAL TAVI :



3D Analytics Soon …

- Validated Physics based simulation …
  - Mitral valve
  - LAA Closure
  - Devices
  - TEVAR / EVAR





3D Printing 2016

Courtesy Materialise

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