

## Objective



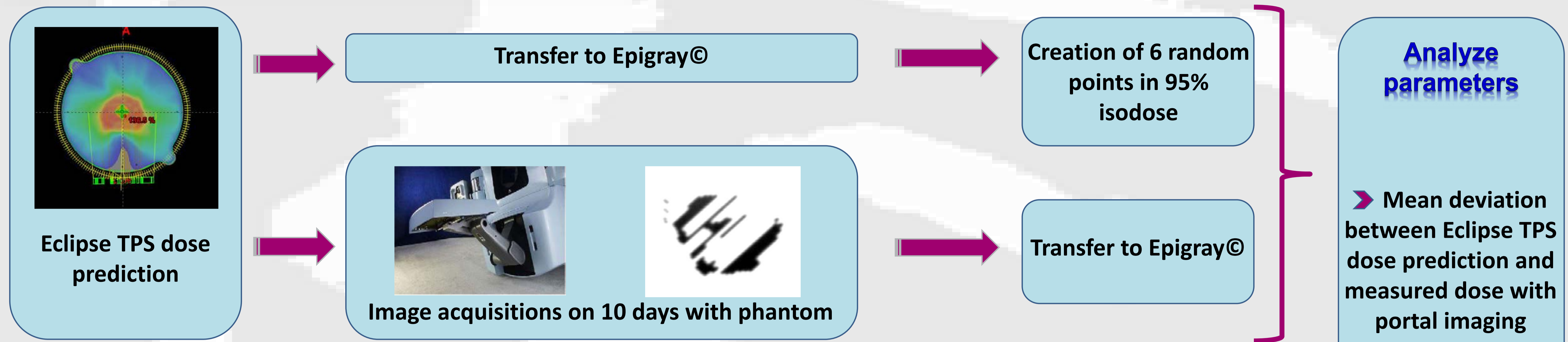
With the new version of the EPIgray® software, in vivo transit dosimetry with portal imaging (aS1000) can be used for Volumetric Modulated Arctherapy (VMAT) treatments from the dose reconstruction in the patient with images acquired continuous mode during the treatment.

The aim of this study is to assess the performance of the EPIgray® software in the field of in vivo dosimetry of VMAT

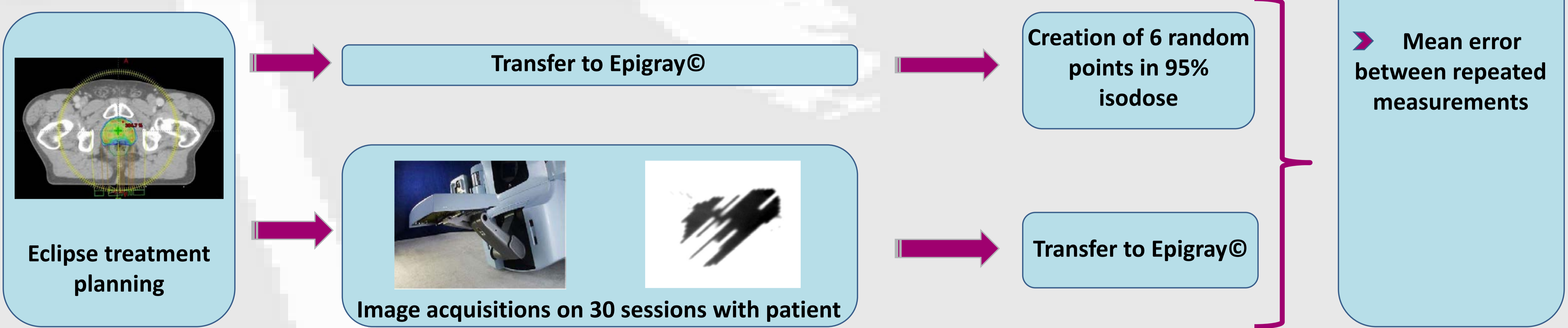


## Material and Methods

### 1- Reproducibility test on water equivalent phantom

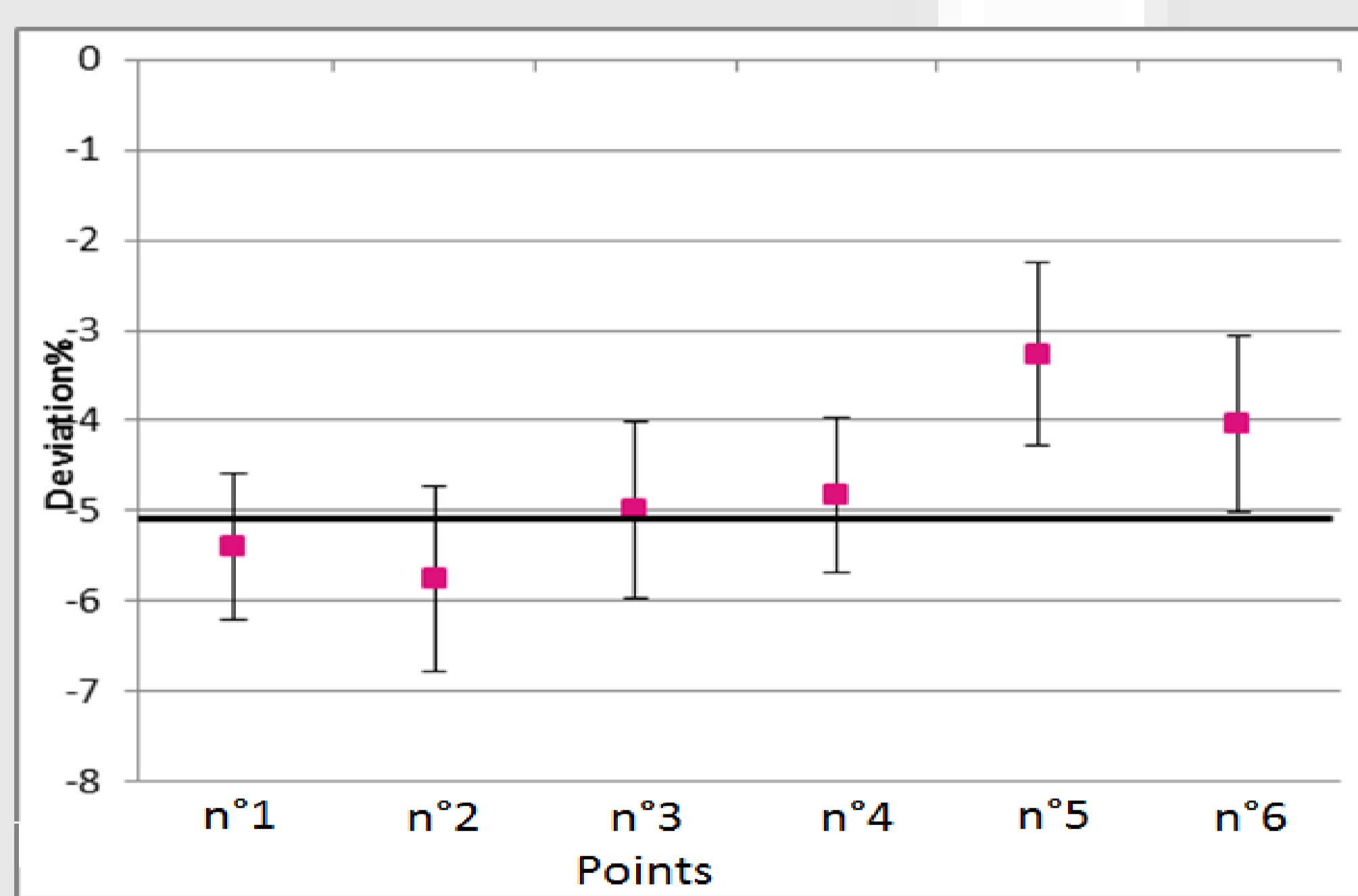


### 2- Reproducibility test on patients with prostate treatment plans

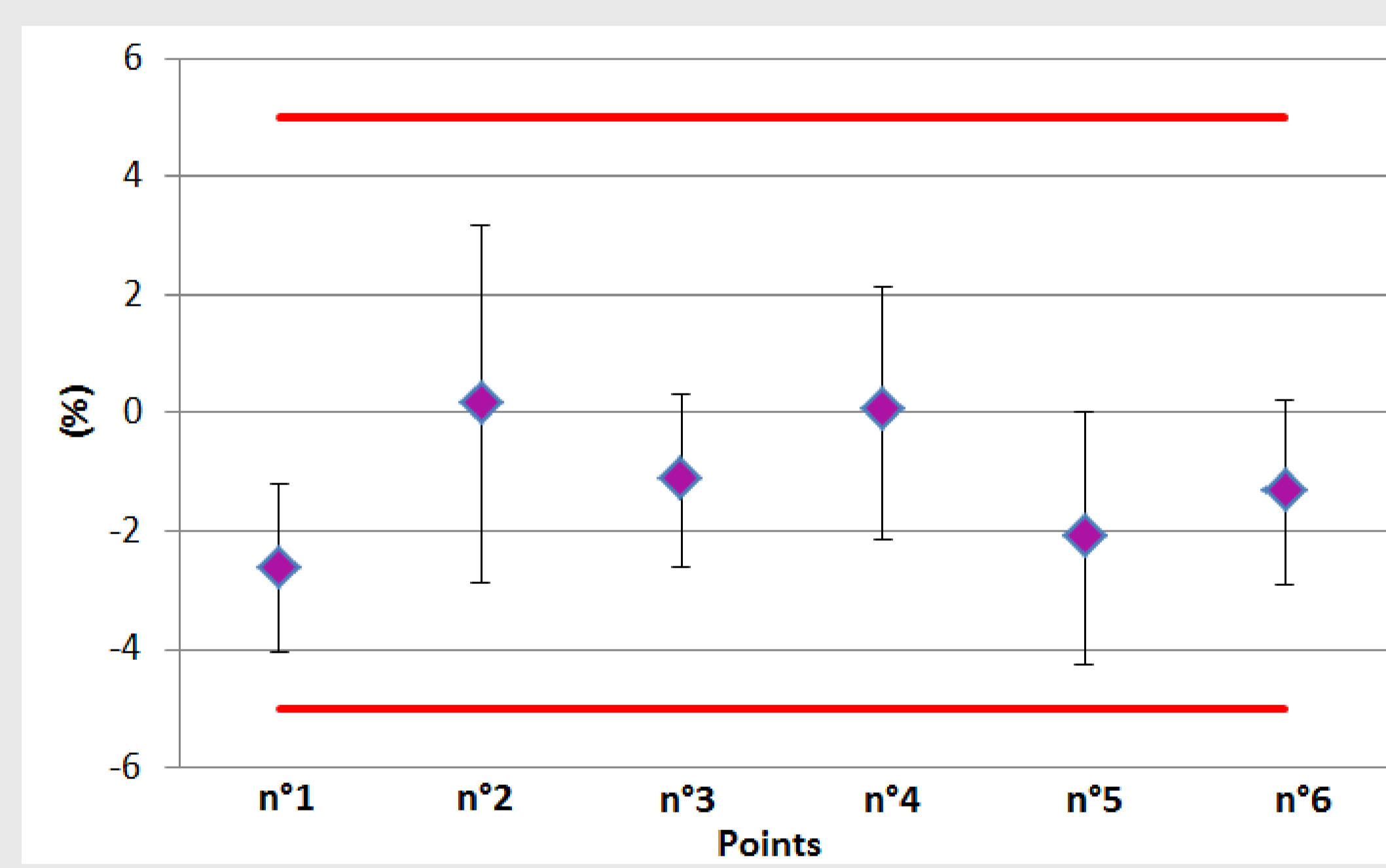


## Results

### Reproducibility Tests



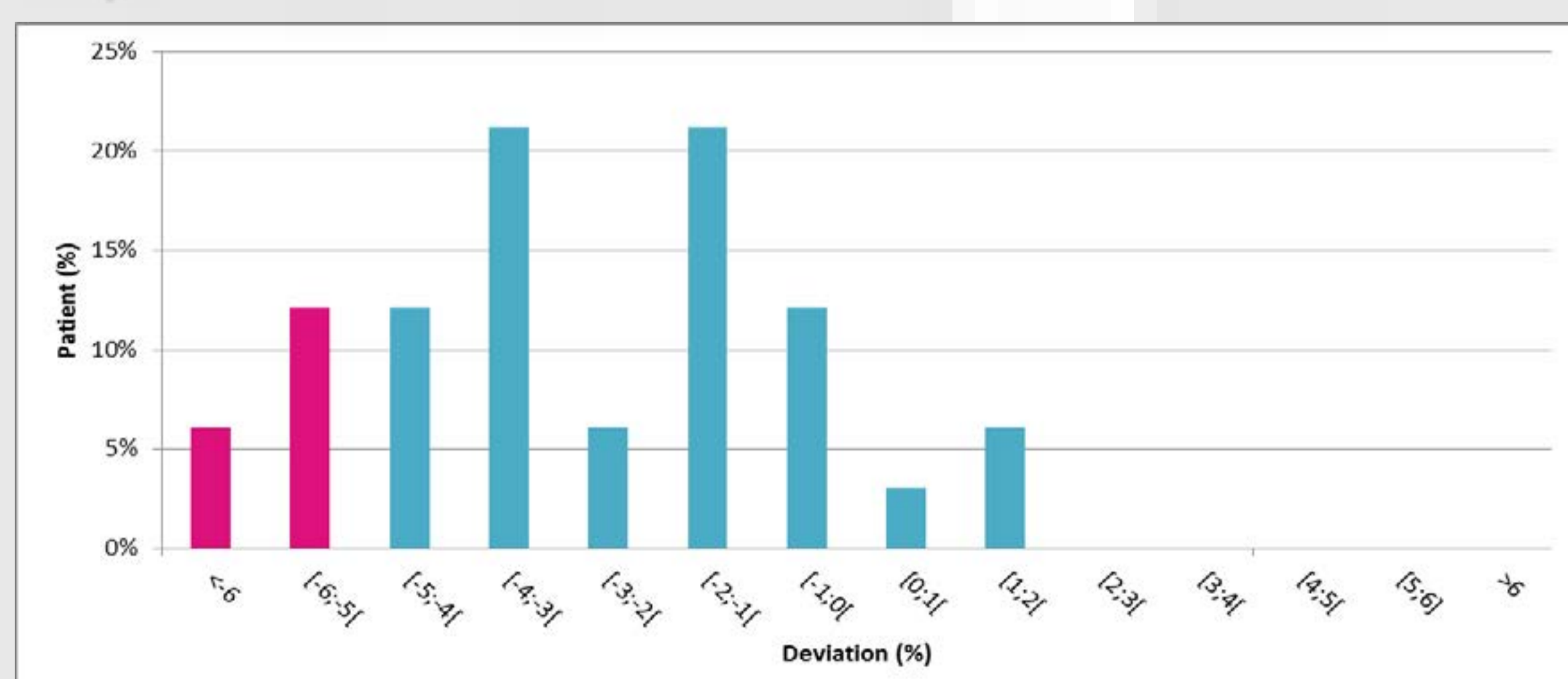
Results with Phantom



Results with patient

- With phantom:
  - ✓ Mean deviation: -4,9%
  - ✓ Mean error: 0,97%
- With patient:
  - ✓ Mean deviation: -1,18%
  - ✓ Mean error: 2,25%

### First results for prostate treatments



- First results for 33 patients treated for prostate cancer
  - ✓ Mean deviation: -3,37 ± 2,71%
- 18% of patients didn't respect the 5% tolerance (Inca criteria)

## Conclusion

➤ EPIgray® provides reproducible and satisfying results on phantom and for « simple » treatments such as RapidArc prostate treatment.

