



# Prospective RandOmized Single-blinded Auto- contouring of GTV

## The PROSA-GTV trial

**Mathis Ersted Rasmussen, MD, PhD-candidate,**  
Jintao Ren, PhD, Post doc.  
Jasper Nijkamp, Ass. Prof.  
Anne Ivalu Holm, PhD,  
**Stine Korreman, Professor of Medical Physics**  
**Jesper Grau Eriksen, MD and Professor**



Undersøge om **AI-assisteret indtegning** af **primære tumorer og involverede lymfeknuder** i hovedhalskræft er gavnlige for den **kliniske indtegningsprocess**

# Materialer

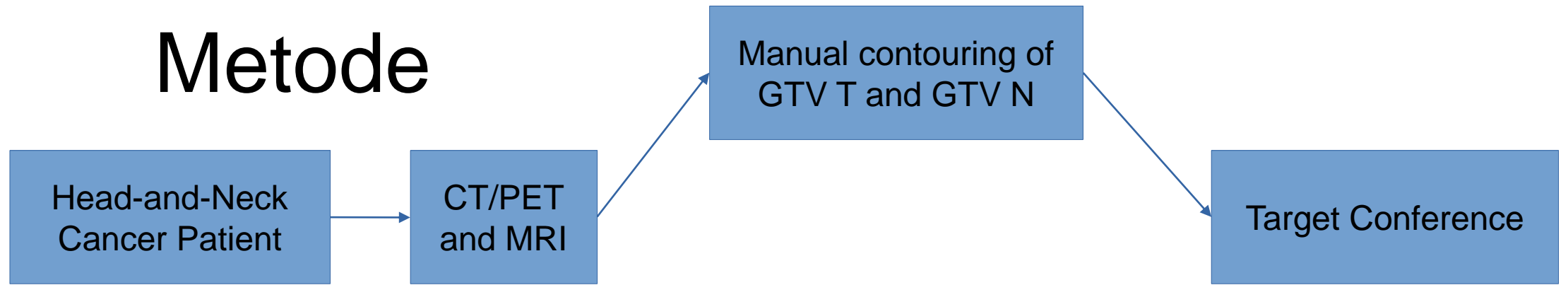
- 100 patienter til kurativt intenderet stråleterapi
  - Inklusionskriterier:
    - Oro-pharynx
    - Hypo-pharynx
    - Supra-glottic larynx
    - Mundhule
    - Skal have planlægnings-CT, PET, T1w og T2w MRI
  - Indtegningsmodellen blev trænet på ~550 patienter fra Aarhus (2013-2020)
-

# Metode

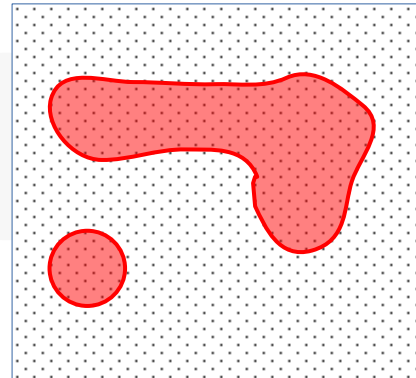
Head-and-Neck  
Cancer Patient



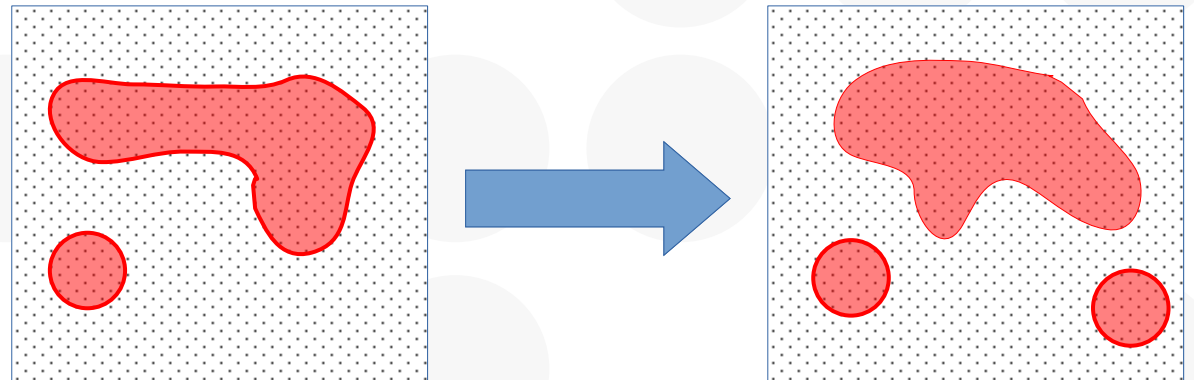
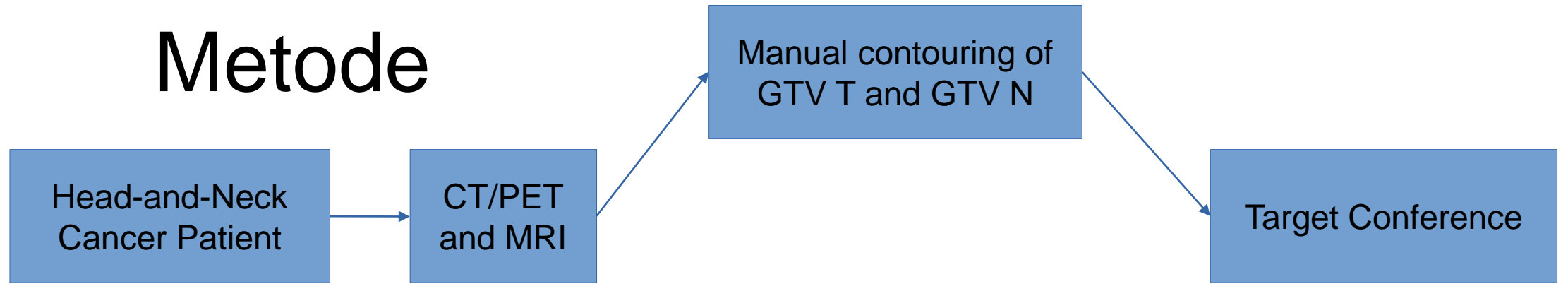
# Metode



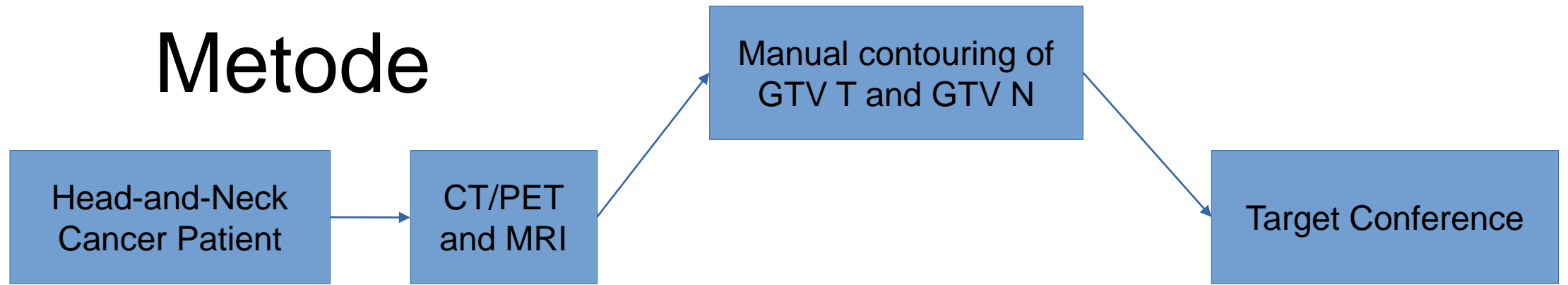
**Resident  
Oncologist**



# Metode



# Metode

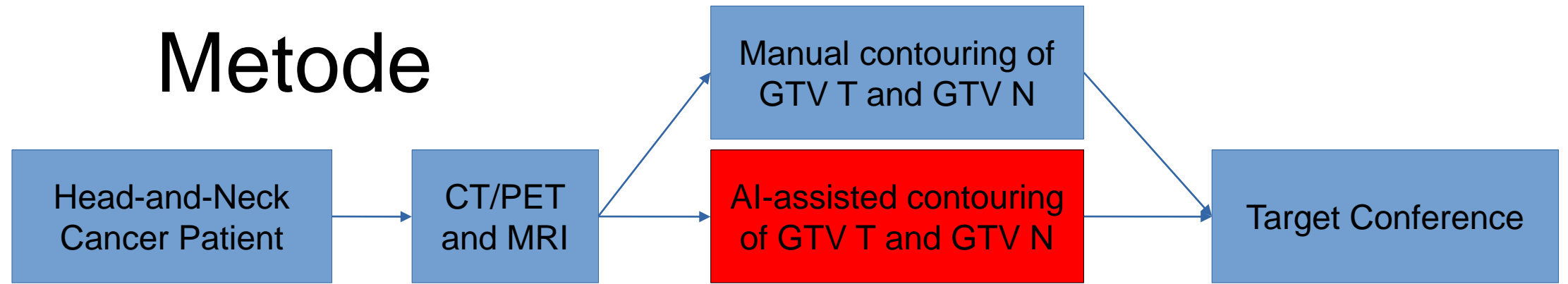


Informeret samtykke



**Resident  
Oncologist**

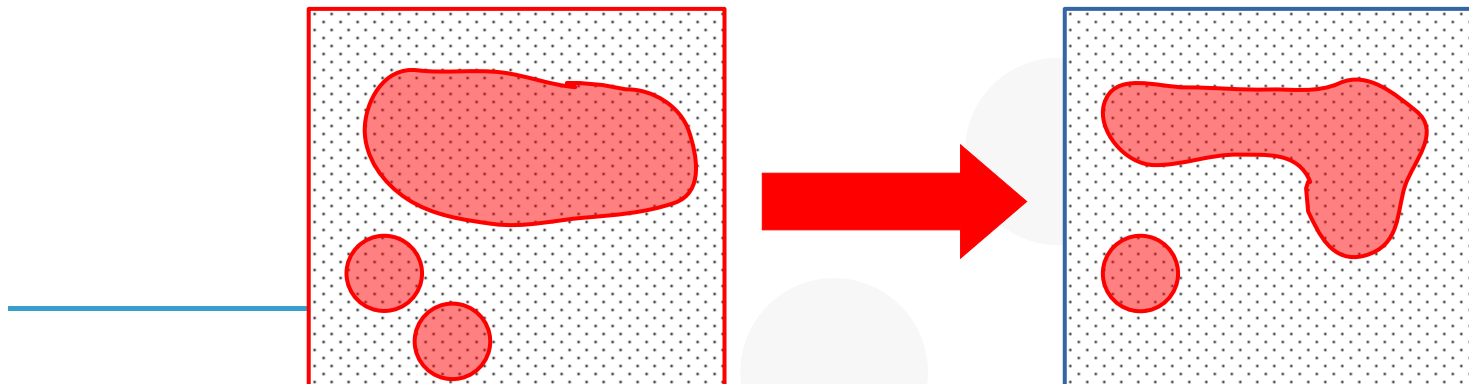
# Metode



Informeret samtykke

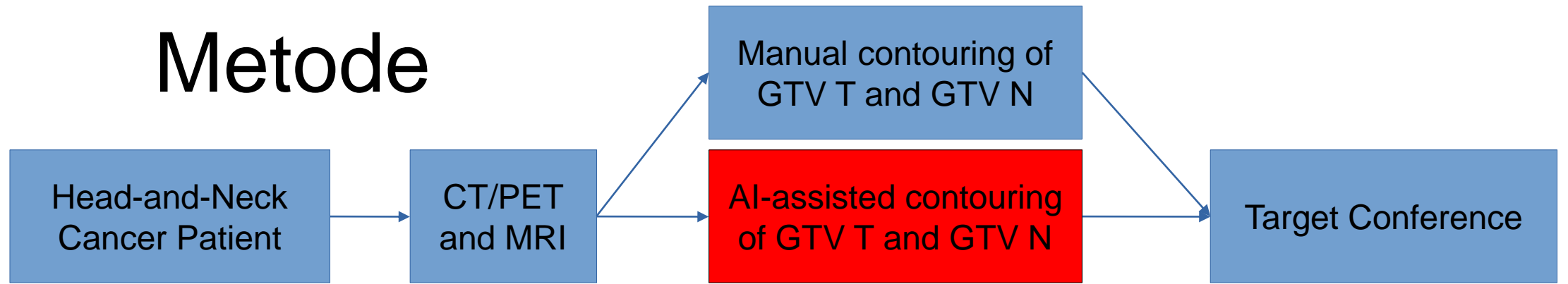


Resident  
Oncologist





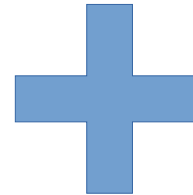
# Metode



Informeret samtykke



**Resident  
Oncologist**



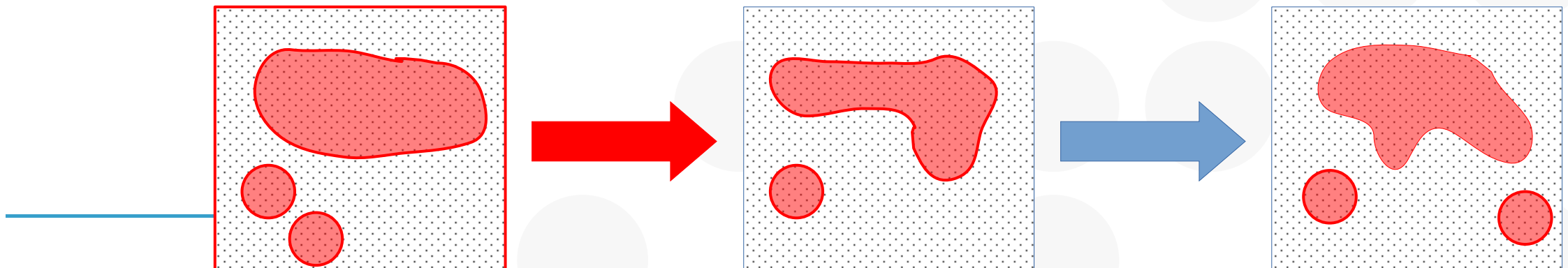
**Specialist  
Oncologist**



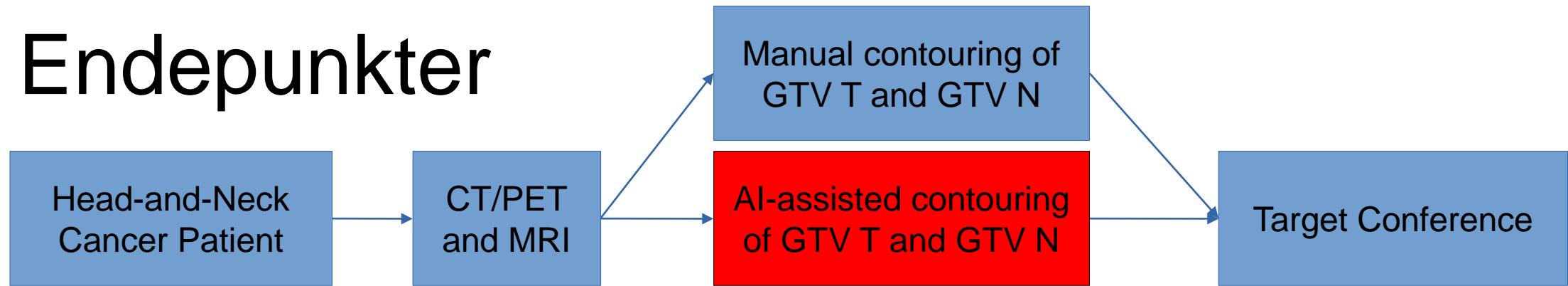
**Specialist  
Radiologist**



**Specialist  
Nuclear  
Medicine**



# Endepunkter



Non-inferiority

## Primære endepunkt

- Mængden af rettelser fra target konference start til endelig godkendelse af strukturer





## Sekundære endepunkter

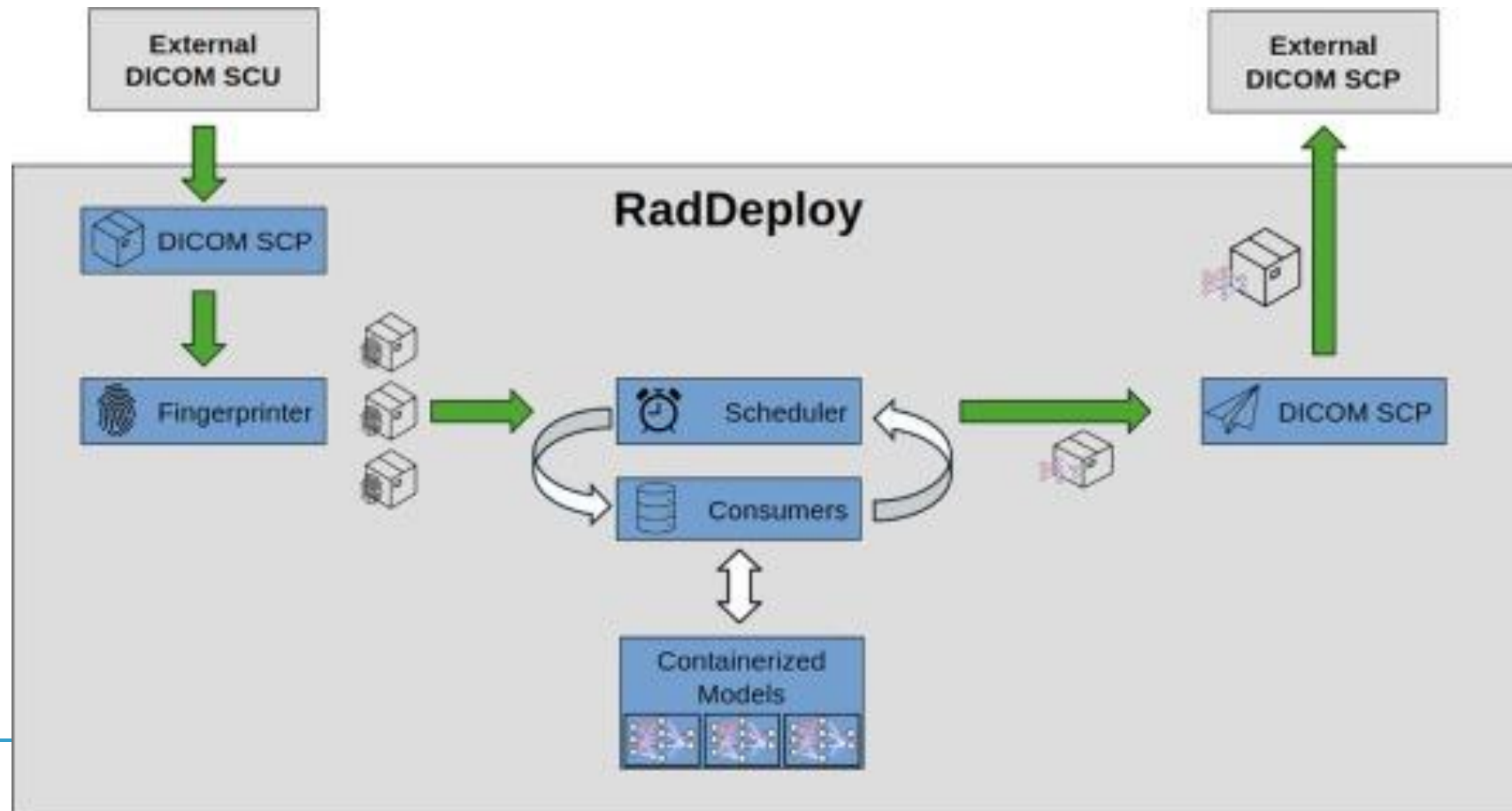
- Tidsforbrug ved target konference
- Selvrapporeret tidsforbrug af GTV-indtegning

# Teknisk Implementering

RadDeploy: A framework for integrating in-house developed software and artificial intelligence models seamlessly into radiotherapy workflows












Mathis Ersted Rasmussen <sup>a b c</sup>  , Casper Dueholm Vestergaard <sup>a c</sup> ,  
Jesper Folsted Kallehauge <sup>a</sup> , Jintao Ren <sup>a c</sup> , Maiken Haislund Guldberg <sup>a</sup> ,  
Ole Nørrevang <sup>a</sup> , Ulrik Vindelev Elstrøm <sup>a</sup> , Stine Sofia Korreman <sup>a b c</sup> 



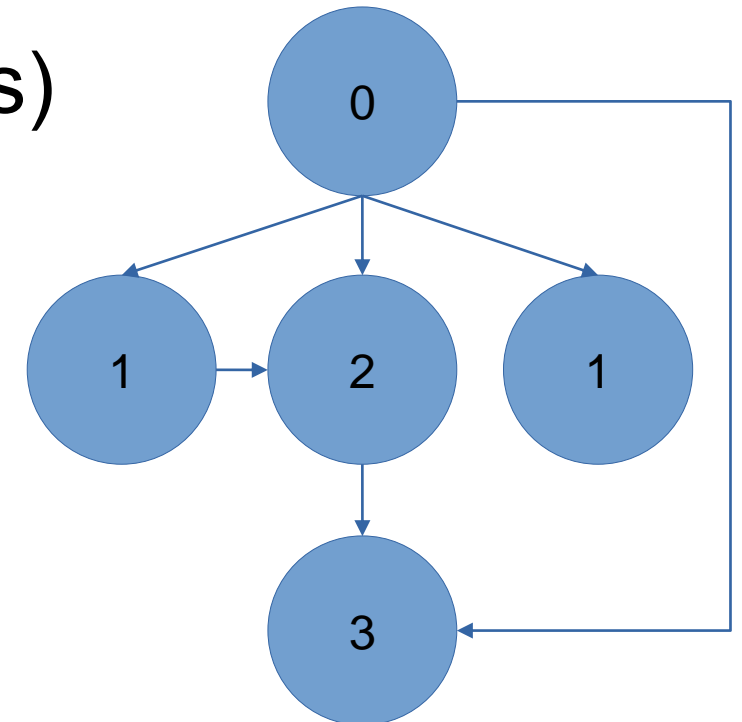
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- Ekstern DICOM Service (DICOM ind – DICOM ud)
- “Flows” er Directed Acyclic Graphs (DAGs)
- Hver “node” er en Docker Container
- Containere sikrer...
  - ... delbarhed (portability)
  - ... genskabbarhed (reproducibility)



# Konklusion

- PROSA-GTV kører fortsat (67 patienter er inkluderet)
- Et eksempel på...
  - Prospektivt randomiseret forsøg
  - Godkendelse fra Videnskabetisk Komité
  - Teknisk implementering (RadDeploy)