Radiotherapie bij prostaatkanker

Piet Ost MD, PhD
Iridium Netwerk
Universiteit Gent

Contact: piet.ost@GZA.be; twitter: @Piet_Ost

Disclaimer

- Alle data in de presentatie zijn gebaseerd op gerandomizeerde studies of de recente internationale richtlijnen!

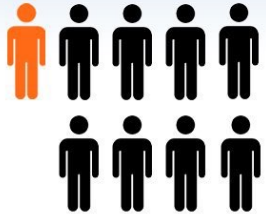
- Ik werk samen met non-profit organizaties in het kader van klinische studies.

- Ik werk samen met de farmaceutische sector in kader van klinische studies.

Achtergrond

What you need to know about Prostate Cancer

Prostate cancer affects **1** in **9** men



with an estimated **1.1 million** yearly diagnoses globally

Accounting for **15%** of all cancer diagnoses

eau Guidelines

What you need to know about Prostate Cancer

Risk of prostate cancer increases with **age**

Risk especially increases after age **50**

Around **65%** of prostate cancer is diagnosed in those **65+**

eau Guidelines

What you need to know about Prostate Cancer

Factors for **increased risk** include

Family history of prostate cancer

Familial syndromes such as hereditary cancers & Lynch syndrome

Ethnic background: men of African descent are **2.5x** more at risk

eau Guidelines

What you need to know about Prostate Cancer

Prostate cancer often has **0** symptoms

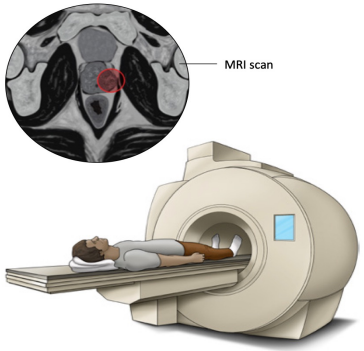
Early detection in men at risk is possible with PSA, MRI and genetic testing

90% of men diagnosed with early disease have nearly **100%** chance to live 5+ more years

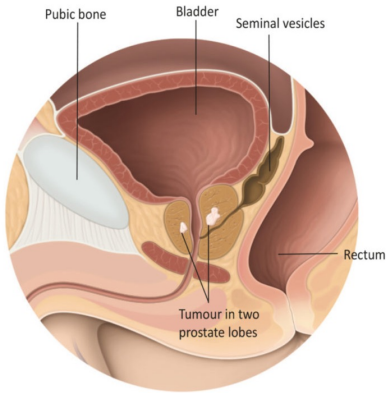
Early risk-adapted detection is key

eau Guidelines

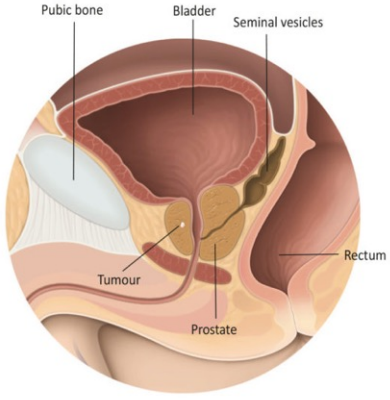
Lokale uitgebreidheid



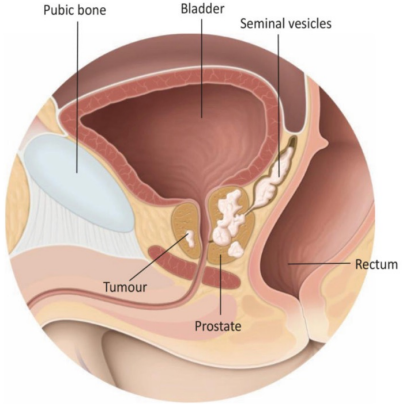
1



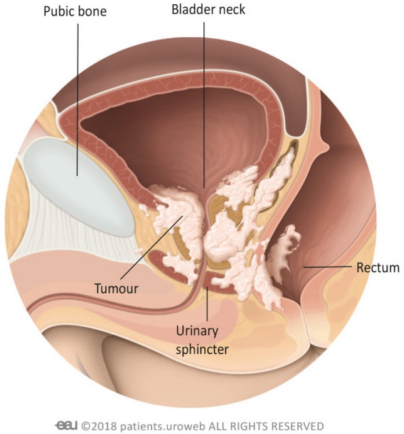
2



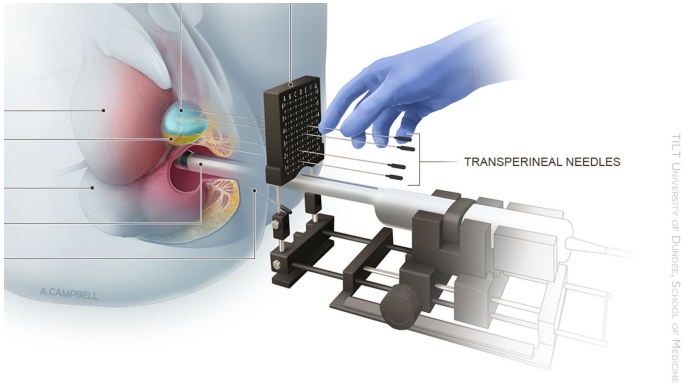
3

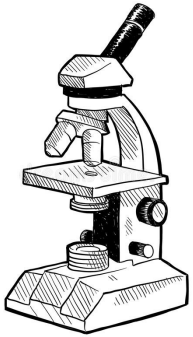


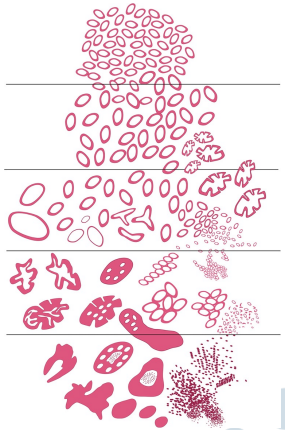
4



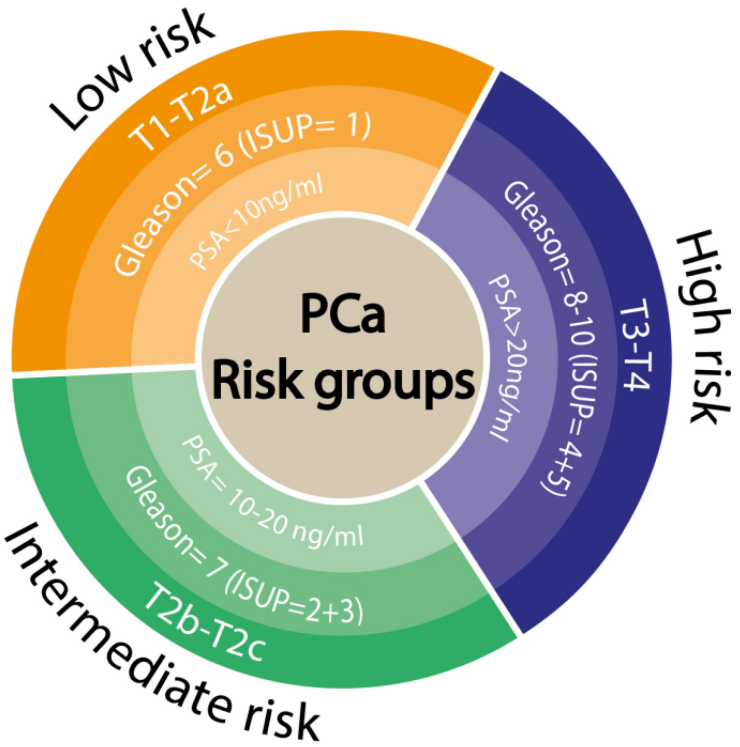
Bioptie – Gleason score – ISUP grade



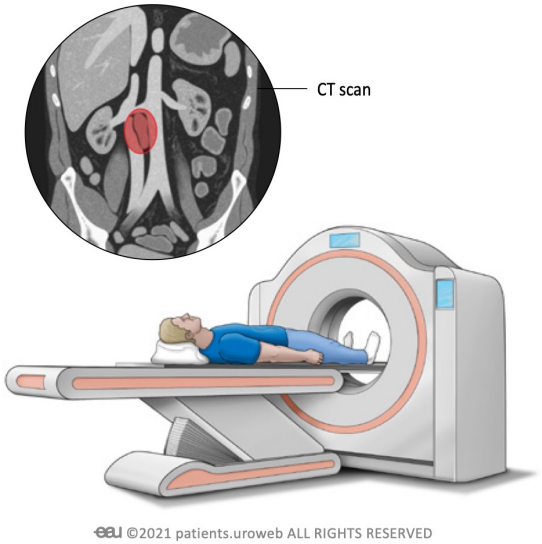


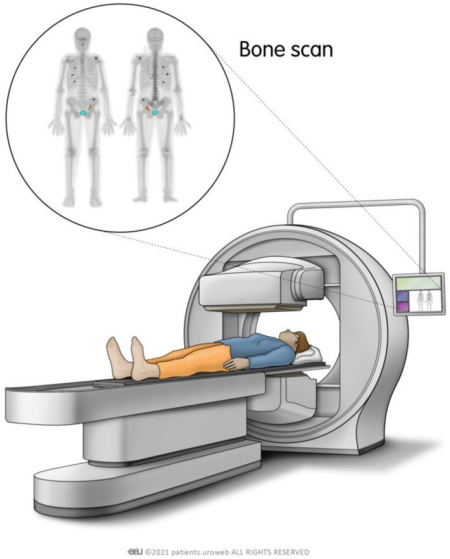


Gelocaliseerde ziekte: 3 factoren bepalen therapie



Uitgebreidheid op afstand

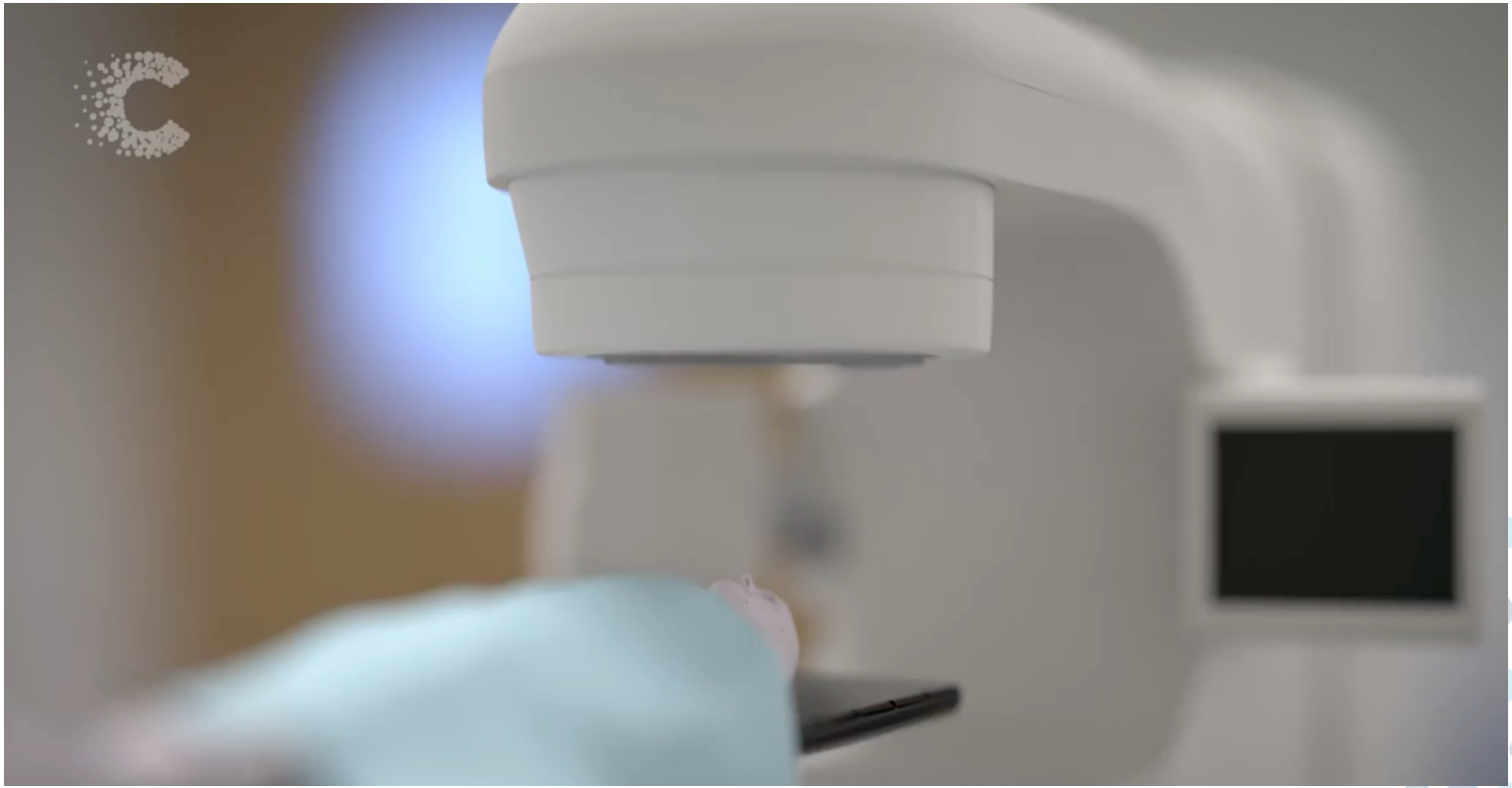




Soms ook een PSMA PET-CT

Radiotherapie

Hoe werkt radiotherapie?



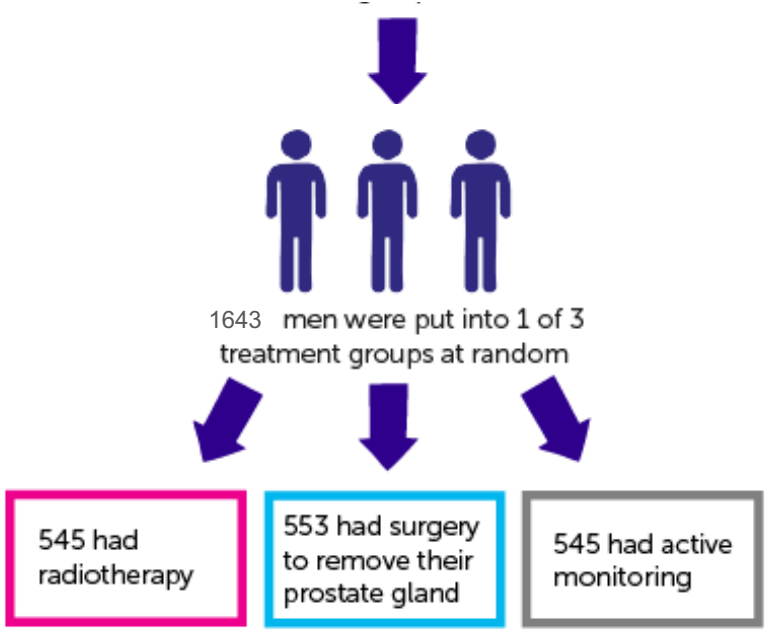
Radiotherapy MYTHBUSTERS

netwerk iridium
Topzorg in radiotherapie

Mythe:
Radiotherapie is minder efficiënt dan chirurgie.

netwerk iridium
Topzorg in radiotherapie

PROTECT trial



10 jaar

Clinical progression	8.9*	9*	22.9*
Mortality	1%	1%	1%

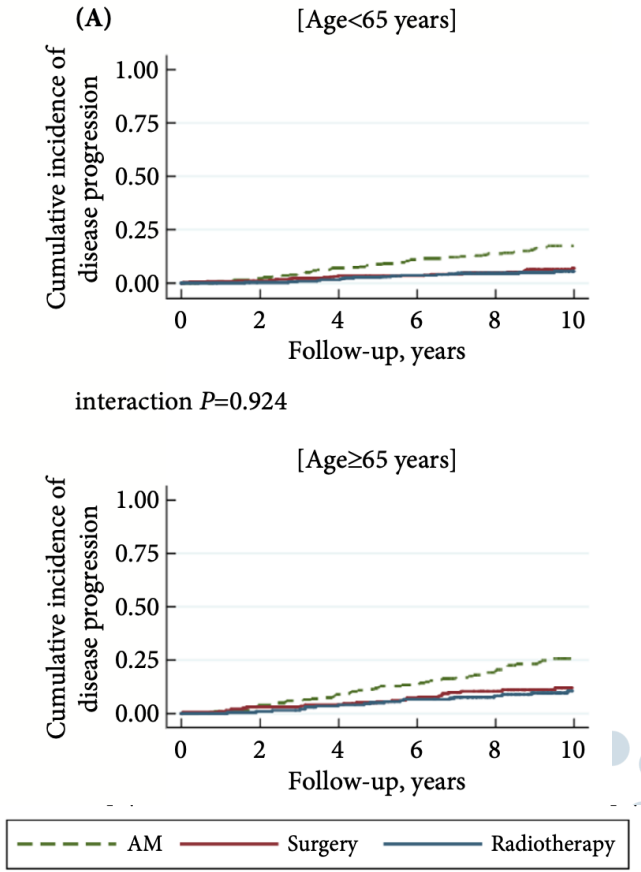
Mythe:
Chirurgie is voor jonge patiënten, radiotherapie voor oudere patiënten.

netwerk iridium
Topzorg in radiotherapie

PROTECT trial: patiënt karakteristieken

62 jaar

(50-69)

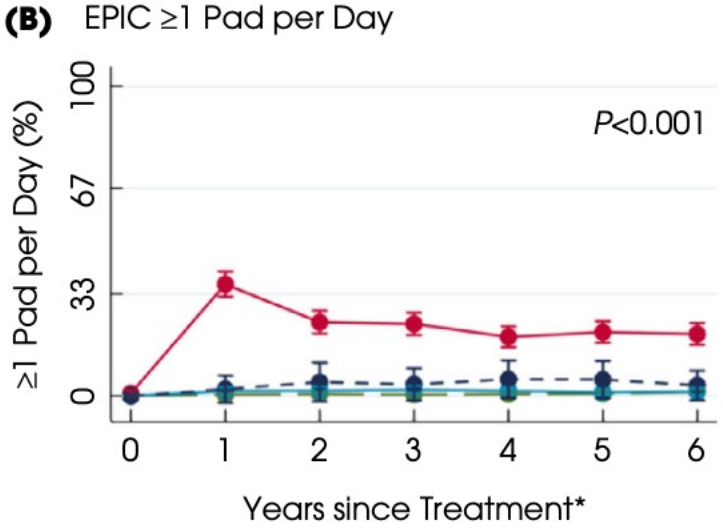


Mythe:
Radiotherapie heeft meer bijwerkingen dan een operatie.

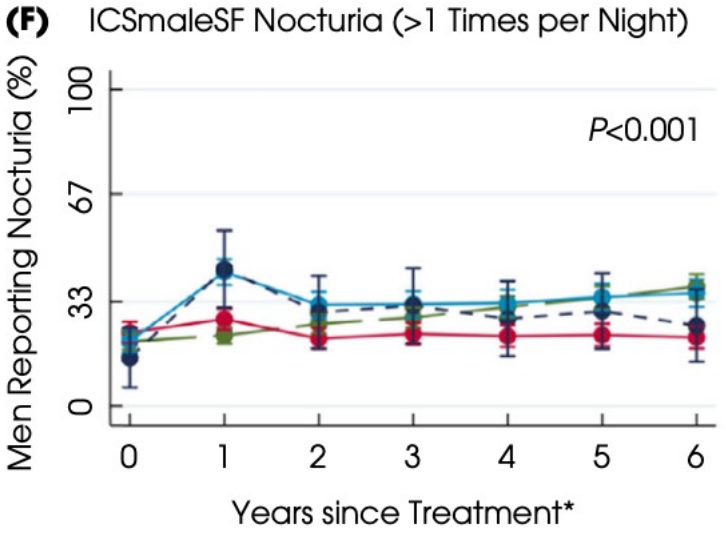
netwerk iridium
Topzorg in radiotherapie

Kwaliteit van leven: plasklachten

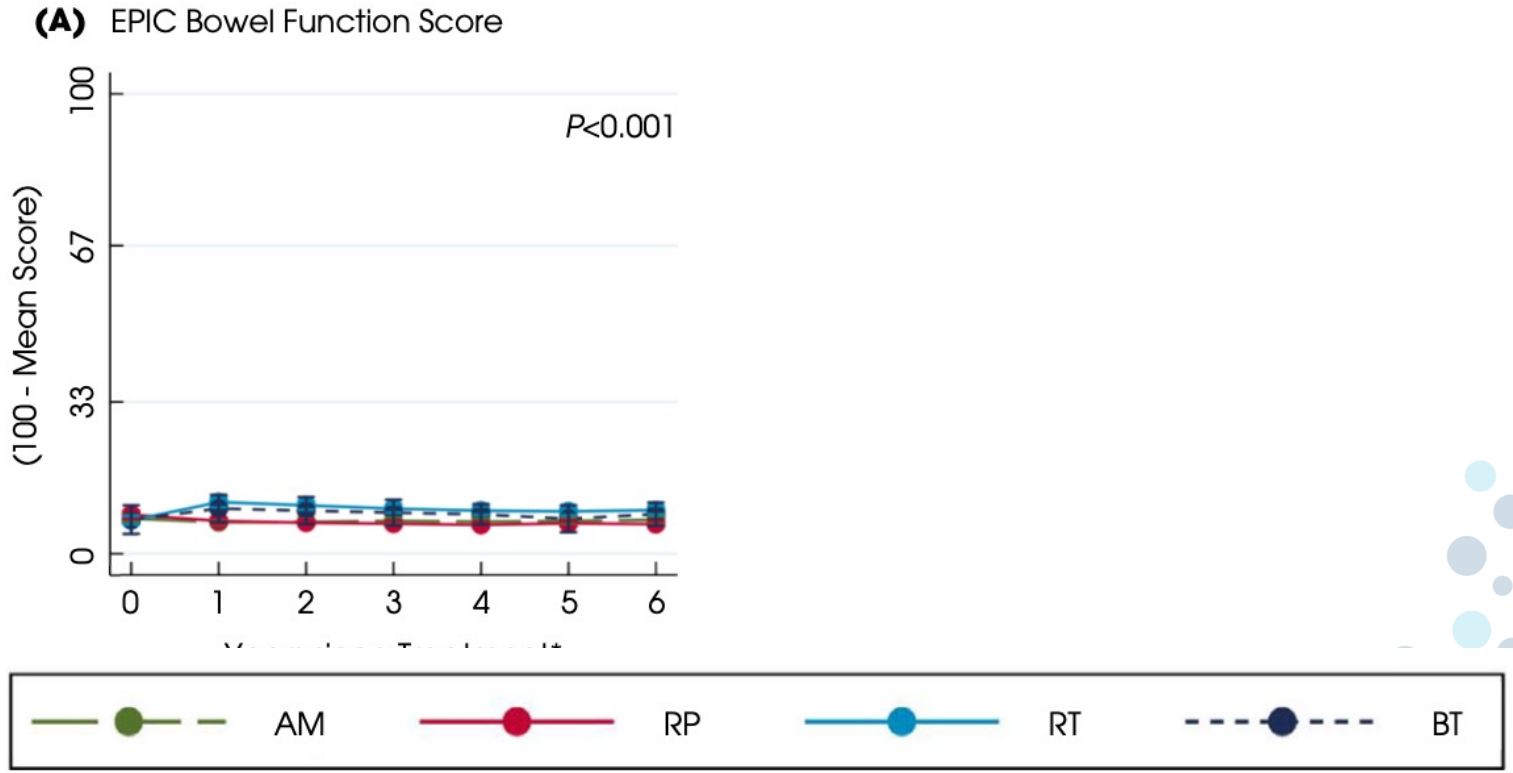
Urineverlies



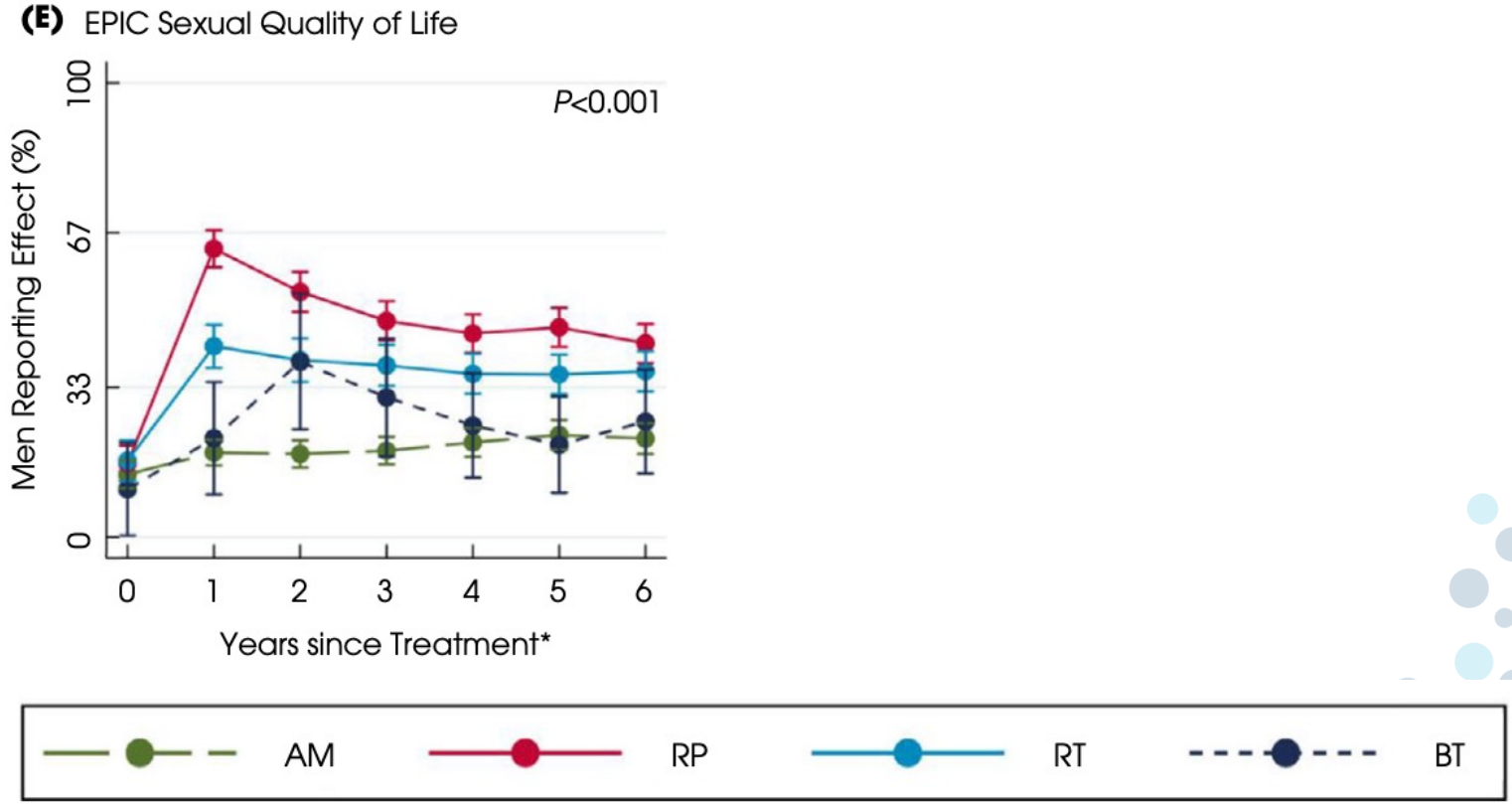
Nachtelijk opstaan



Kwaliteit van leven: darmklachten

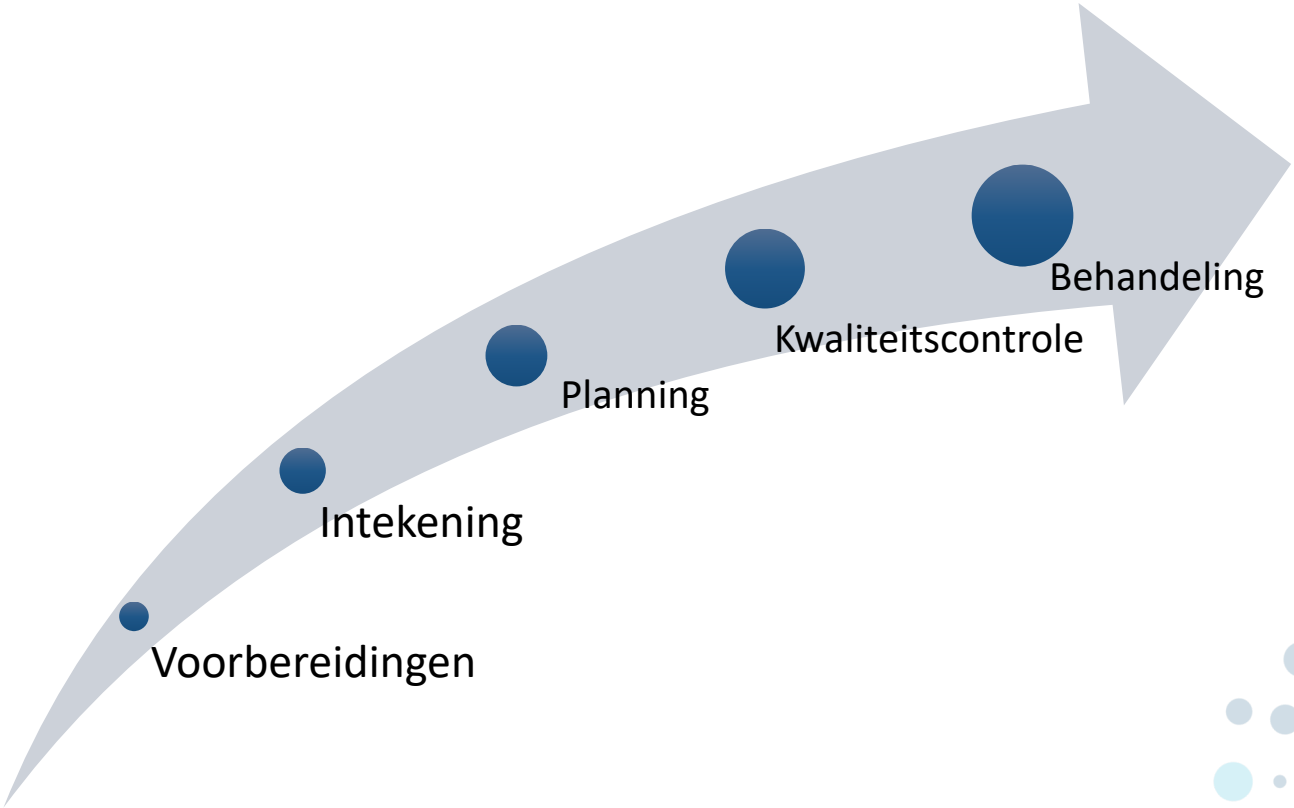


Kwaliteit van leven: sexualiteit

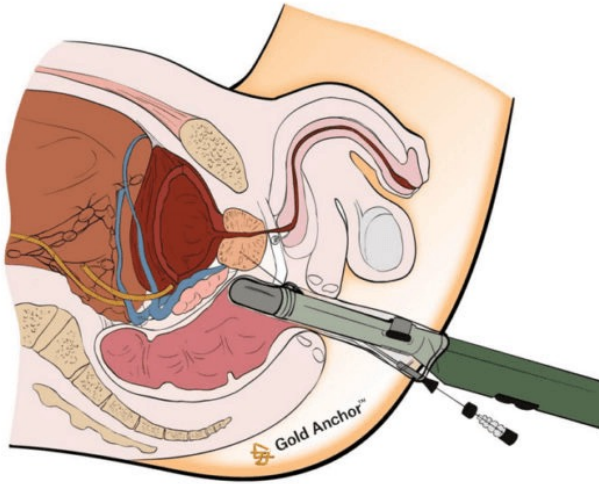


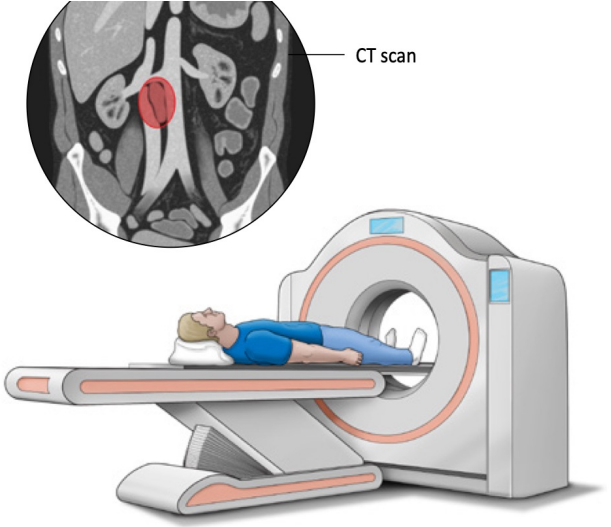
Radiotherapie aanpak

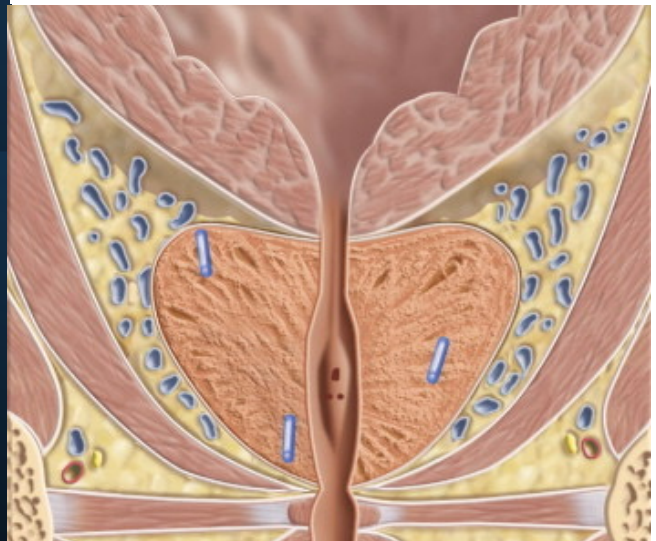
Meerdere belangrijke stappen

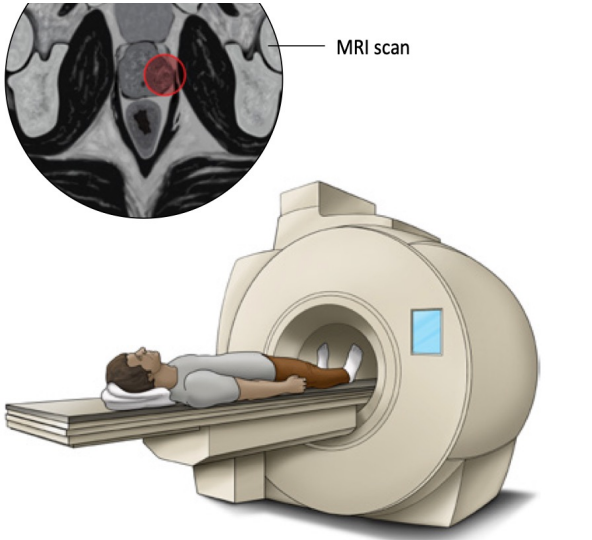


Voorbereiding

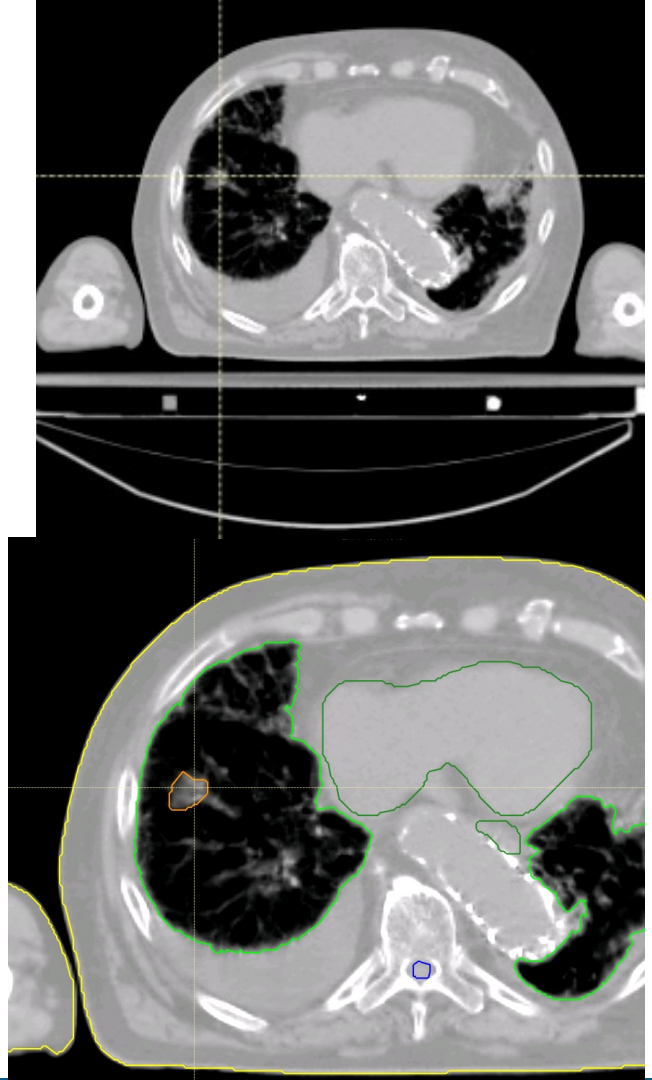




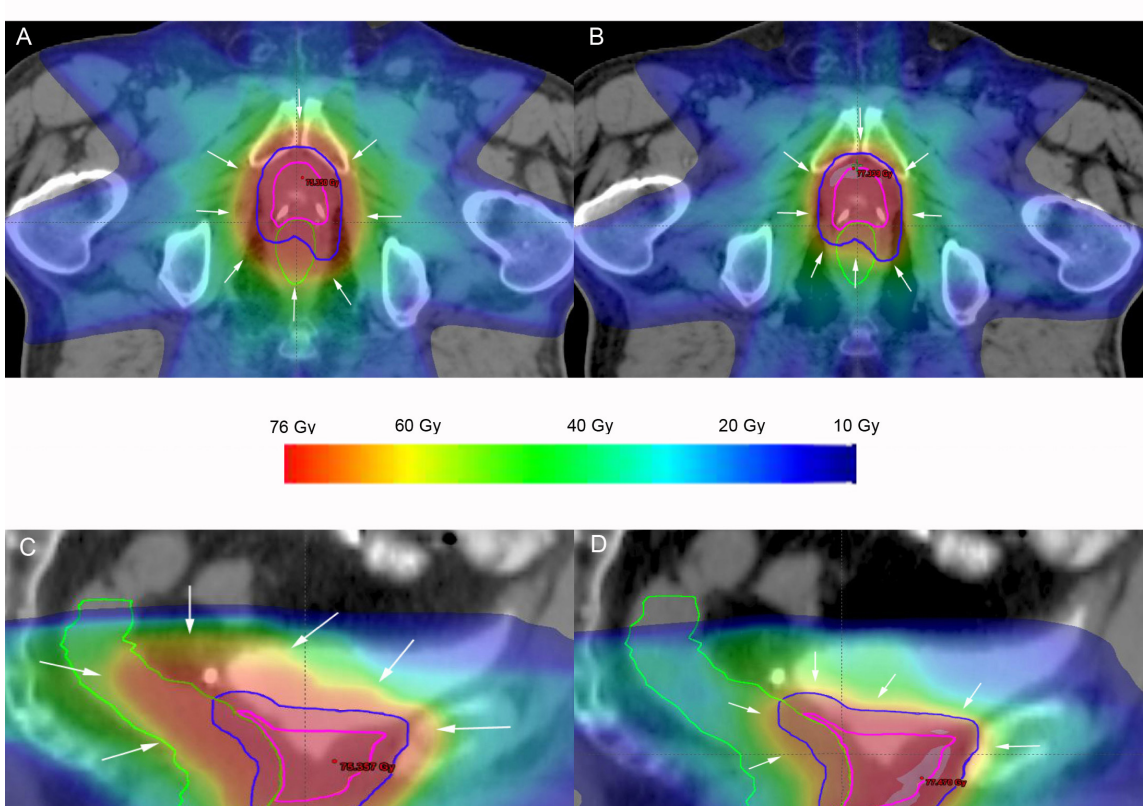




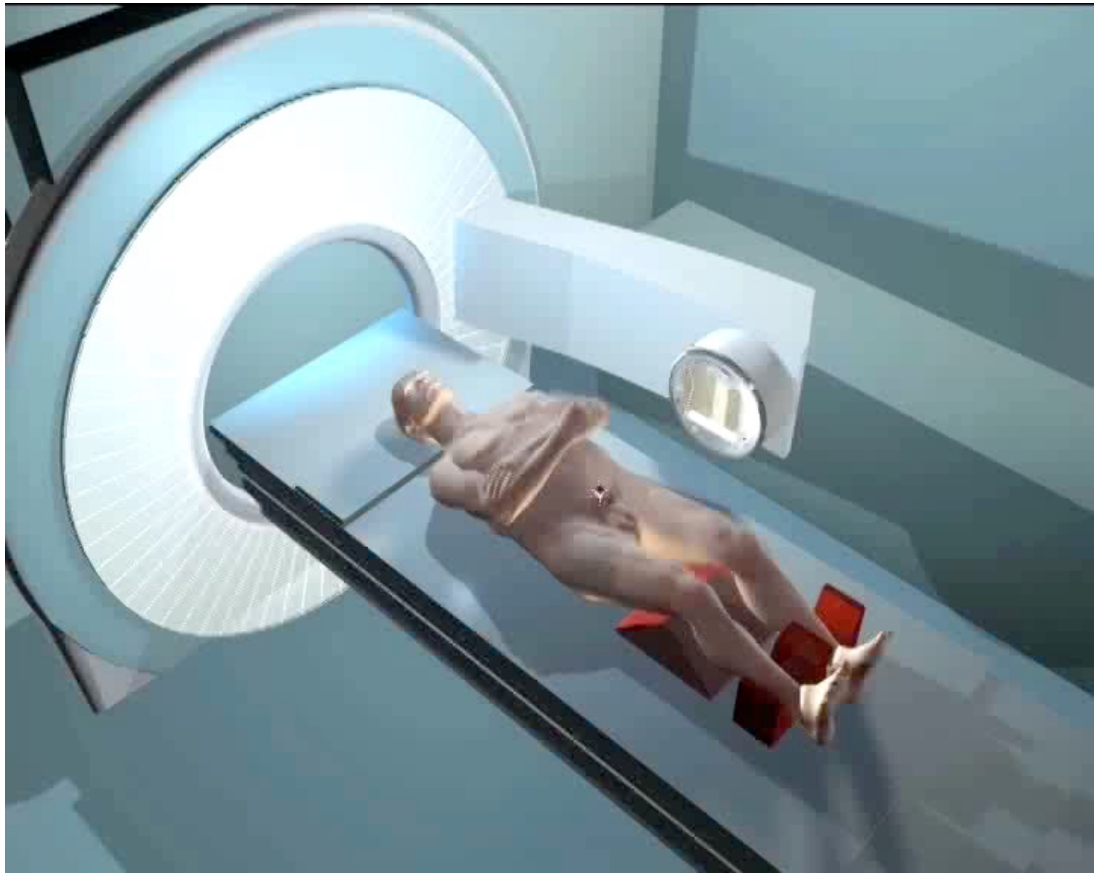
Intekening



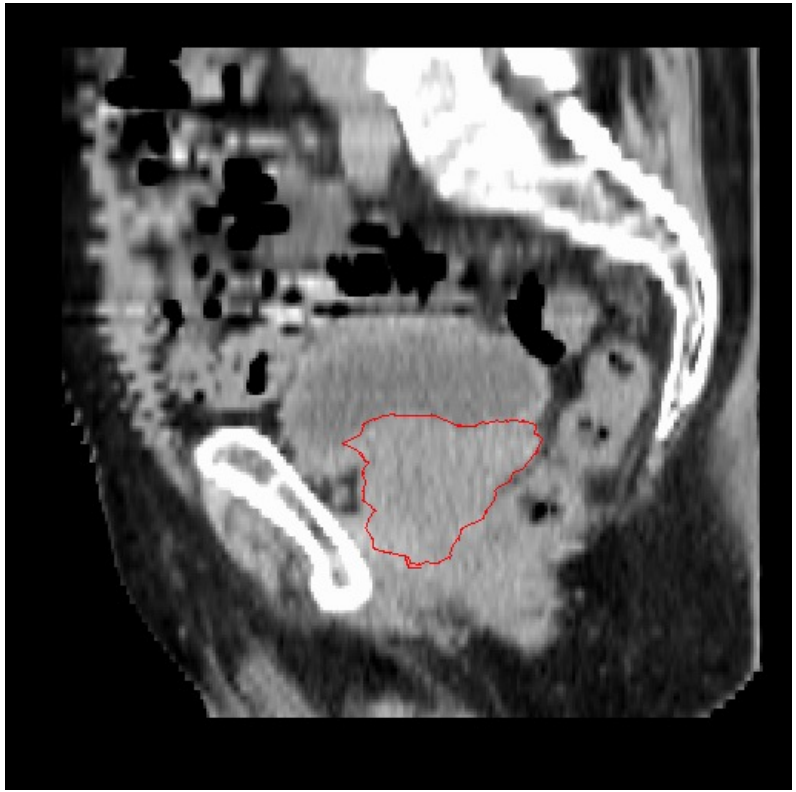
Planning



Behandeling



Monitoring tijdens radiotherapie



https://www.goldanchormarker.com/enabling/#truebeam-abh

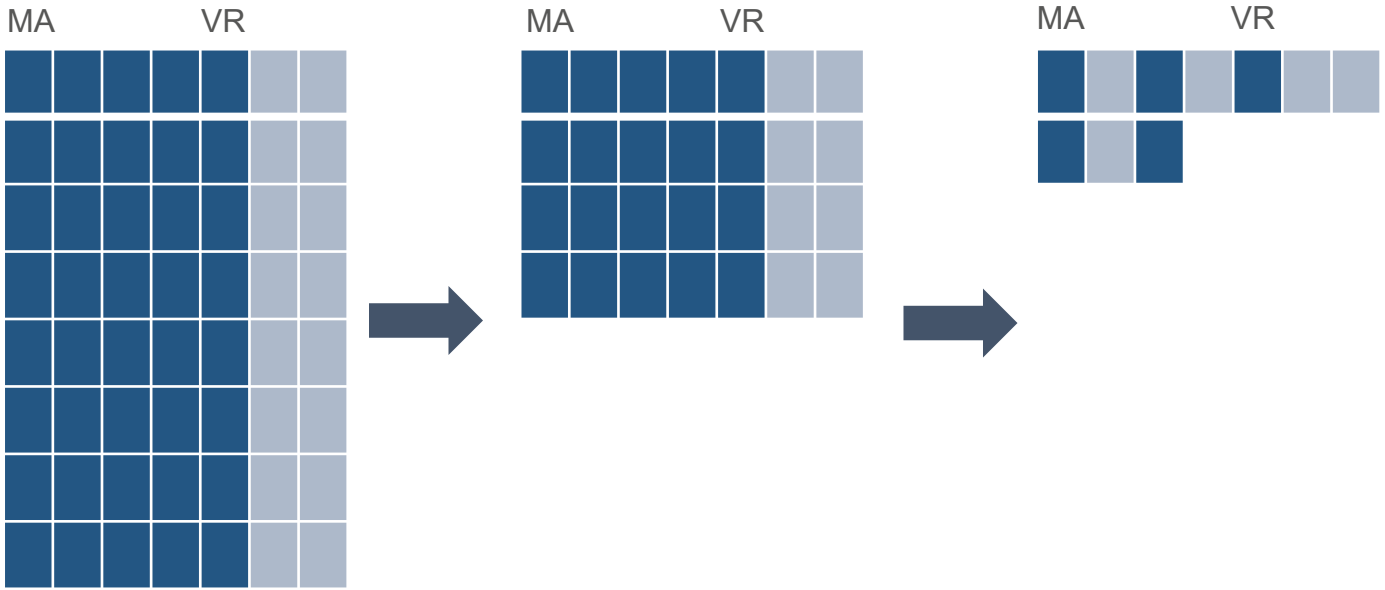
Verloop

Radiotherapie evolutie

Mythe:
Een radiotherapiebehandeling duurt zeer lang.

netwerk iridium
Topzorg in radiotherapie

Evolutie aantal sessies

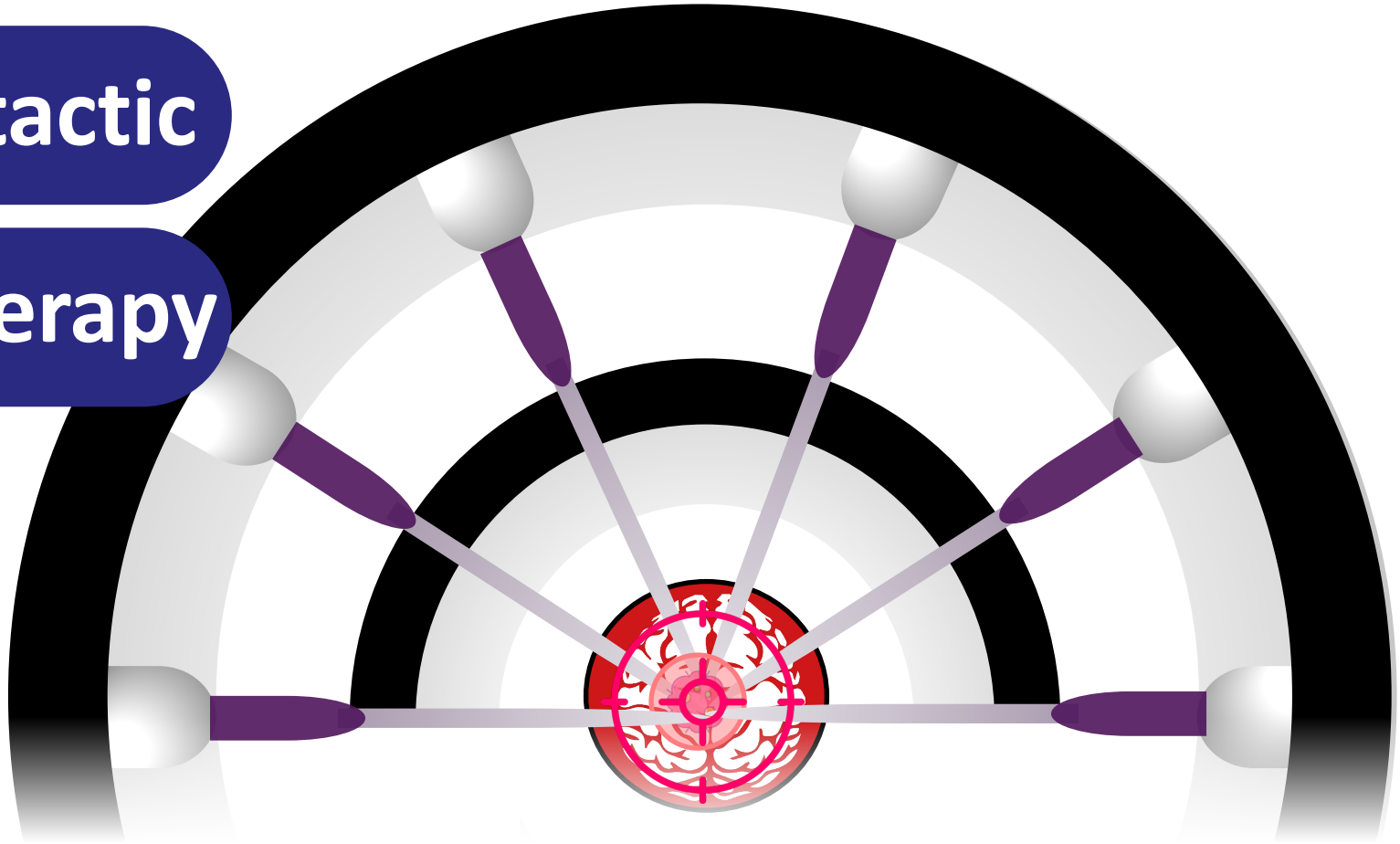


35 **20** **5**

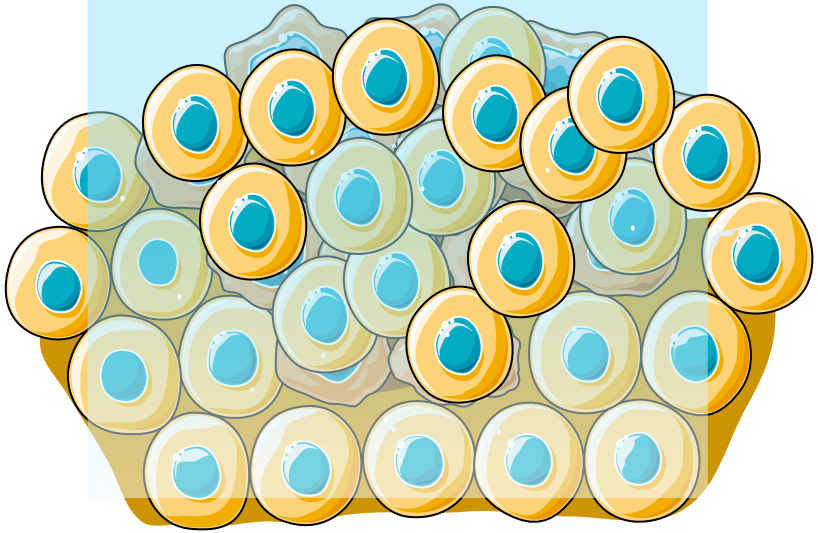
Duur van een sessie

10-20 min

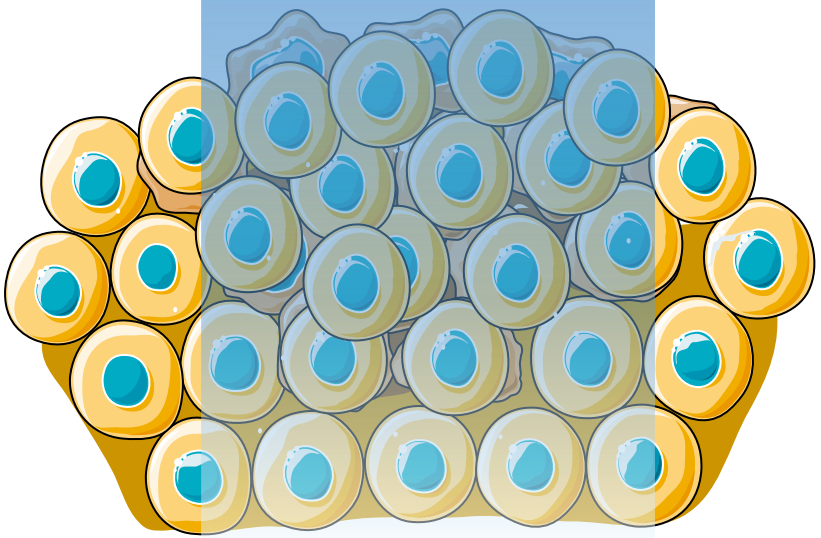
Stereotactic radiotherapy



Conventional



Stereotactic

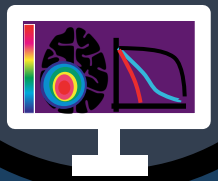



S RS
tereotactic
adio
urgery
S ABR
tereotactic
ative
adiation therapy
S BRT
tereotactic
ody
adiation
herapy
S RT
tereotacti
adiation
herapy

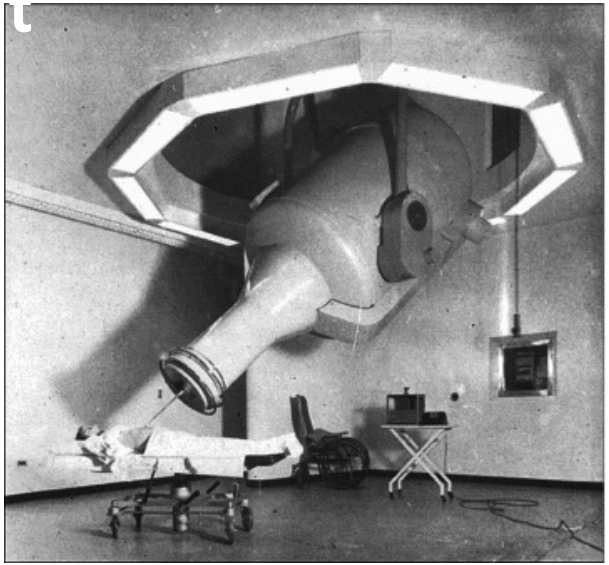
Precieze localisatie

Hardware

Software

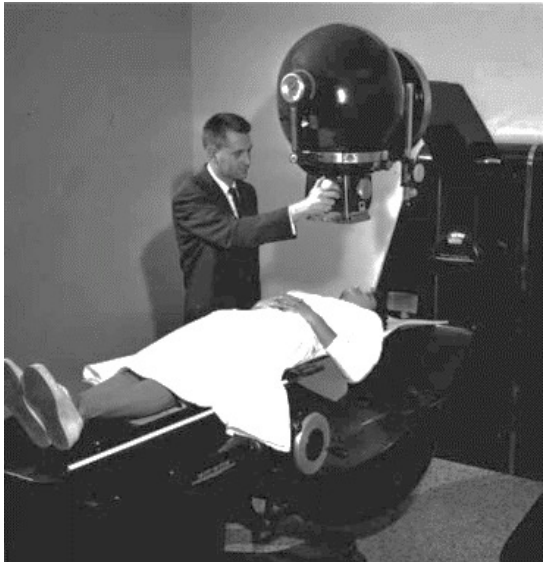


Resonant transformer



1950s

Early photon unit



1960s

Linear Accelerator

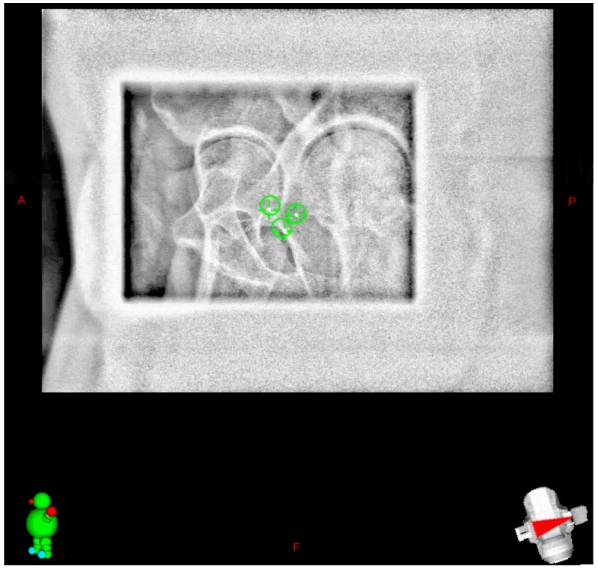
- Treat 360^0
- Automated
- Safe delivery
- Minimal exposure

1990s

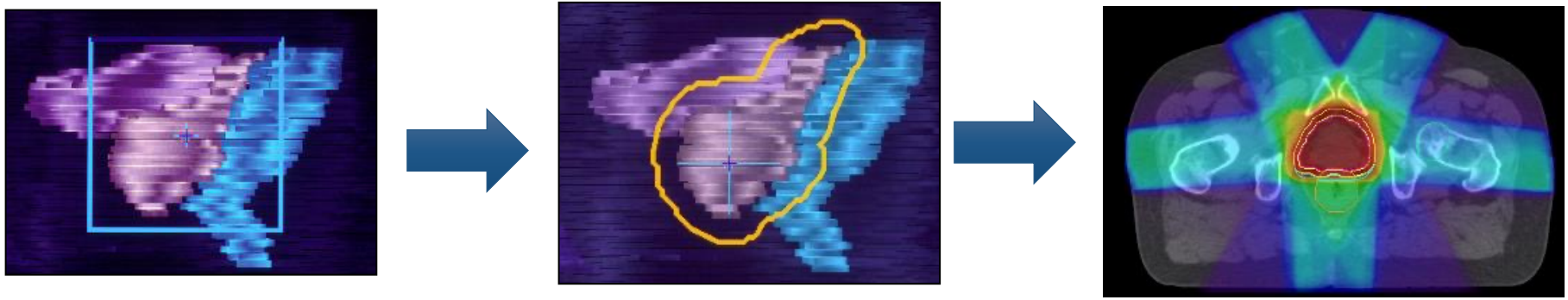
Modern Linac

2010s

Track tumour movement



Technologie leidt tot minder bijwerkingen



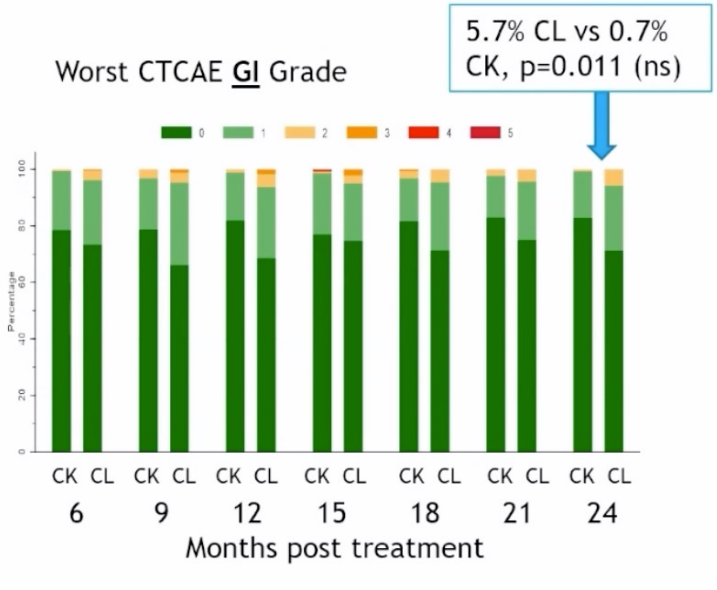
2 D | 3 D | IMRT

Darmklachten

56% → 33% → 14%

Technologie leidt tot minder bijwerkingen

- Prostaatmonitoring tijdens radiotherapie
  - Markers
  - MRI



Data PACE trial

De kans op darmklachten is met een factor 10 gedaald!

Radiotherapie indicaties

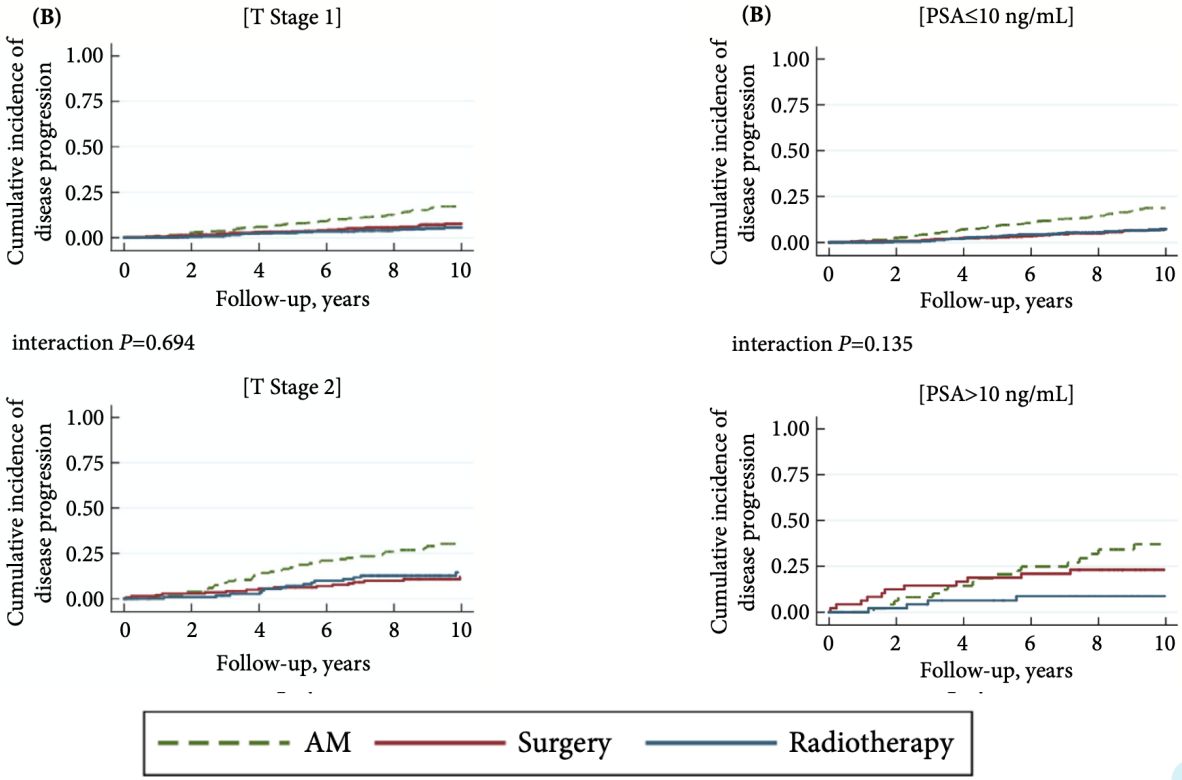
ALLE stadia.

- Primaire prostaatkanker van stadium 1 tem 4.
- Na een operatie
- Bij uitzaaiingen

Mythe:
Je kan niet meer geopereerd worden na RT.

netwerk iridium
Topzorg in radiotherapie

Kans op herval na RT vs chirurgie

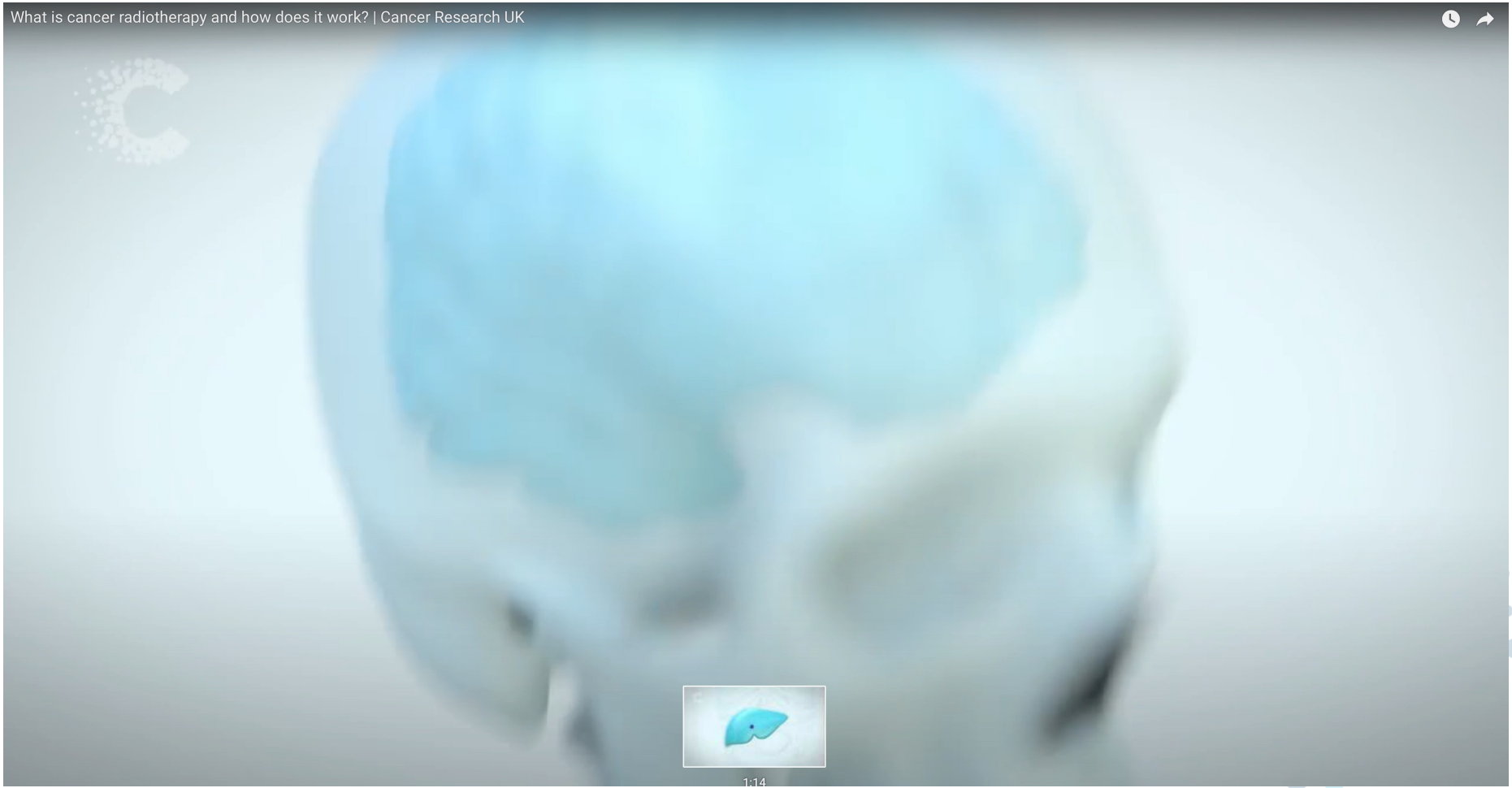


Prostatectomie na primaire radiotherapie

- Is technisch mogelijk, maar meer bijwerkingen.
- Is zeer zelden nodig
- Vaak kan een lokaal herval met een alternatieve behandeling aangepakt worden
  - Radiotherapie
  - HIFU/Cryo
  - Hormonale therapie

Mythe:
Is protonen niet beter voor mij?

netwerk iridium
Topzorg in radiotherapie


What is cancer radiotherapy and how does it work? | Cancer Research UK
1:14

NEE,
geen toegevoegde waarde!

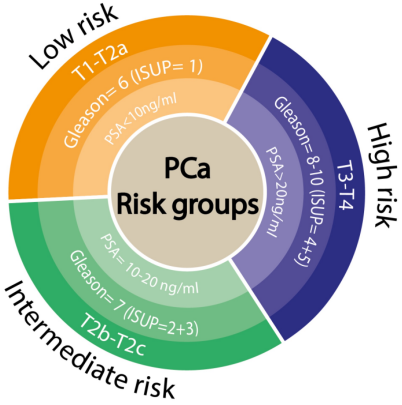
Combinatie met hormonale therapie

Wat is hormonale therapie?

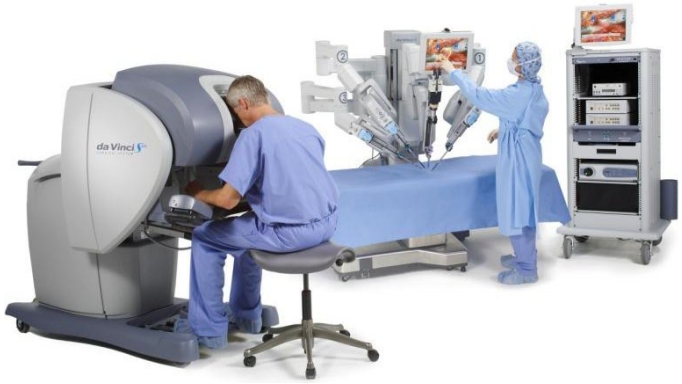
- Een behandeling via inspuitingen of per orale medicatie.

- Werking:
  - Verlaging van het testosteron (mannelijk hormoon)
  - Blokkeren van inwerking van testosteron.
- DOEL:
  - Overleving verlengen
- DUUR:
  - Meestal tijdelijk (6 maand of 18-24 maand)

Welke patiënten dienen hormonale therapie te krijgen?



Alle patiënten met uitzaaiingen of hoogrisico en sommige intermediair risico patiënten. NOOIT bij laag risico



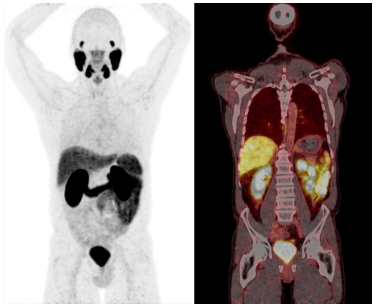
Bijna altijd na een operatie.

Toekomst

THUNDER trial
Individualisatie van de behandeling op basis van de biologie.

Verfijnen van de diagnose van prostaatkanker

1. PSMA



2. Moleculaire diagnostiek

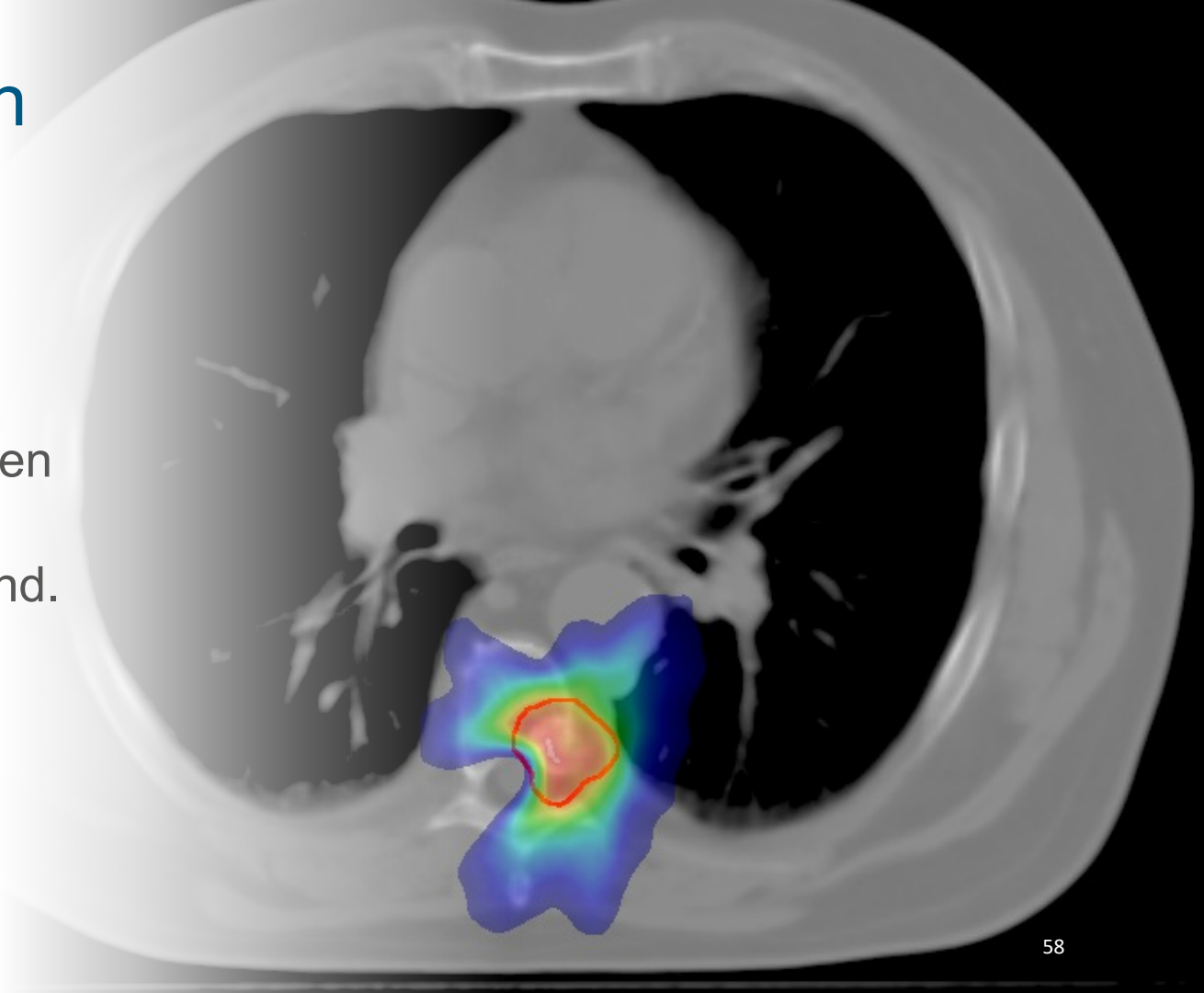
DOEL:
- Minder hormonale therapie geven

OF

- Meer hormonale therapie geven

Bestralen van uitzaaiingen

- Technisch mogelijk
- Bijna nooit bijwerkingen
- Efficiëntie op lange termijn nog niet gekend.



Conclusies

- Radiotherapie is voor de meeste prostaatkankerpatiënten een goede optie.
- Radiotherapie is even efficiënt dan chirurgie.
- De kans op bijwerkingen is enorm afgenomen door toegenomen precisie.
- Het aantal sessies neemt sterk af.