Universitätsspital Basel

Radioonkologische Therapie des lokal begrenzten Prostatakarzinoms:

State of the art

Alexandros Papachristofilou

Interessenskonflikte

Finanzielle Interessen:
Accord Healthcare, Astellas, AstraZeneca, Bayer, Debiopharm, Janssen, Merck, Orionpharma, Sanofi

Mitgliedschaften:
DEGRO, ESTRO, SAKK, SASRO, SRO

Stiftungen:
RTFCCR

Lokal begrenztes ProstataCa

Wir sprechen heute nur über

behandlungsbedürftige PCA,

unter Berücksichtigung von:

- Progressionsrisiko
- Lebenserwartung
- Behandlungswunsch der Patienten

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National Comprehensive Cancer Network®

NCCN Guidelines Version 2.2026
Prostate Cancer

INITIAL RISK STRATIFICATION AND STAGING WORKUP FOR CLINICALLY LOCALIZED DISEASE[i]

Risk Group	Clinical/Pathologic Features (Staging, ST-1)			Additional Evaluation[g,l]
Low[l]	Has all of the following: • cT1–cT2a • Grade Group 1 • PSA <10 ng/mL			• Confirmatory testing can be used to assess the appropriateness of active surveillance (PROS-F 2 of 5)
Intermediate[l]	Has all of the following: • No high-risk group features • No very-high-risk group features • Has one or more intermediate risk factors (IRFs): ▸ cT2b–cT2c ▸ Grade Group 2 or 3 ▸ PSA 10–20 ng/mL	Favorable intermediate	Has all of the following: • 1 IRF • Grade Group 1 or 2 • <50% biopsy cores positive (eg, <6 of 12 cores)[k]	• Confirmatory testing can be used to assess the appropriateness of active surveillance (PROS-F 2 of 5)
		Unfavorable intermediate	Has one or more of the following: • 2 or 3 IRFs • Grade Group 3 • ≥50% biopsy cores positive (eg, ≥6 of 12 cores)[k]	• Soft tissue imaging and consider bone imaging[g] ▸ If regional metastases are found, see PROS-7 ▸ If distant metastases are found, see PROS-14 for Low-Volume M1(Metachronous or Synchronous) or Synchronous Oligometastatic[h] CSPC or PROS-15 for High-Volume M1 CSPC
High	Has one or more high-risk features, but does not meet criteria for very high risk: • cT3–cT4 • Grade Group 4 or Grade Group 5 • PSA >20 ng/mL			Bone and soft tissue imaging[g] ▸ If regional metastases are found, see PROS-7 ▸ If distant metastases are found, see PROS-14 for Low-Volume M1 (Metachronous or Synchronous) or Synchronous Oligometastatic[h] CSPC or PROS-15 for High-Volume M1 CSPC
Very high	Has at least two of the following: • cT3–cT4 • Grade Group 4 or 5 • PSA >40 ng/mL			Bone and soft tissue imaging[g] ▸ If regional metastases are found, see PROS-7 ▸ If distant metastases are found, see PROS-14 for Low-Volume M1 (Metachronous or Synchronous) or Synchronous Oligometastatic[h] CSPC or PROS-15 for High-Volume M1 CSPC

Lokal begrenztes ProstataCa

Wir sprechen heute nur über behandlungsbedürftige PCA,

die nicht alle Kriterien für «low risk» erfüllen,

aber auch keine «high risk» Merkmale aufweisen.

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Lokal begrenztes ProstataCa

Das ist die «einfachste» Kategorie PCA.

Deswegen streiten wir (Uro/RadOnk) uns gerne…

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Lokal begrenztes ProstataCa: wo sehe ich die Urologie?

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Wir brauchen immer noch jemanden, für die Biopsie...

Lokal begrenztes ProstataCa: wo sehe ich die Urologie?

Wir brauchen immer noch jemanden, für die Biopsie...

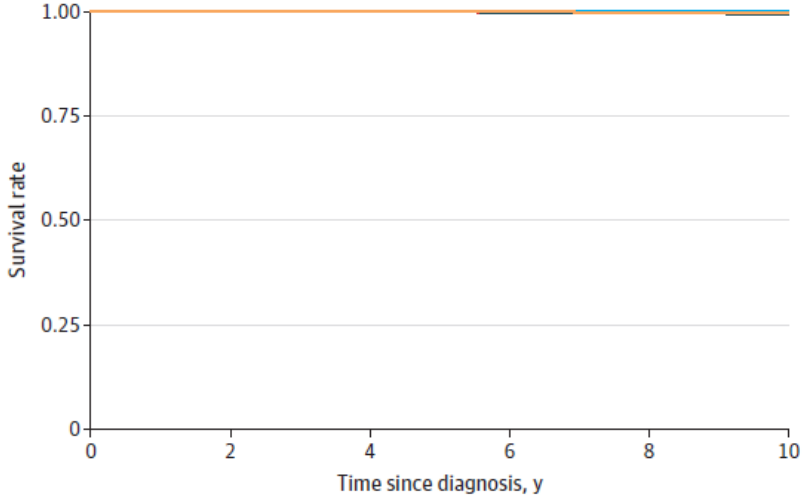
Lokal begrenztes ProstataCa: wie gut sind wir?

JAMA | Original Investigation

Functional Outcomes After Localized Prostate Cancer Treatment

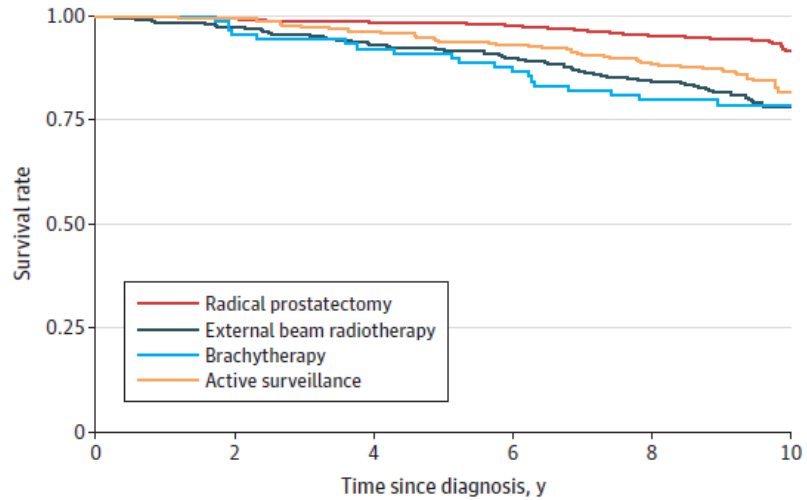
Bashir Al Hussein Al Awamlh, MD; Christopher J. D. Wallis, MD, PhD; David F. Penson, MD, MPH; Li-Ching Huang, PhD; Zhiguo Zhao, MS; Ralph Conwill, BS; Ruchika Talwar, MD; Alicia K. Morgans, MD, MPH; Michael Goodman, MD, MPH; Ann S. Hamilton, PhD, MA; Xiao-Cheng Wu, MD, MPH; Lisa E. Paddock, PhD, MPH; Antoinette Stroup, PhD; Brock B. O'Neil, MD; Tatsuki Koyama, PhD; Karen E. Hoffman, MD, MHSc, MPH; Daniel A. Barocas, MD, MPH

C Favorable prognosis: prostate cancer death



No. of patients						
Radical prostatectomy	1026	1012	1001	988	941	112
External beam radiotherapy	346	338	322	310	281	43
Brachytherapy	90	84	81	76	68	7
Active surveillance	365	362	348	335	313	41

A Favorable prognosis: all-cause death



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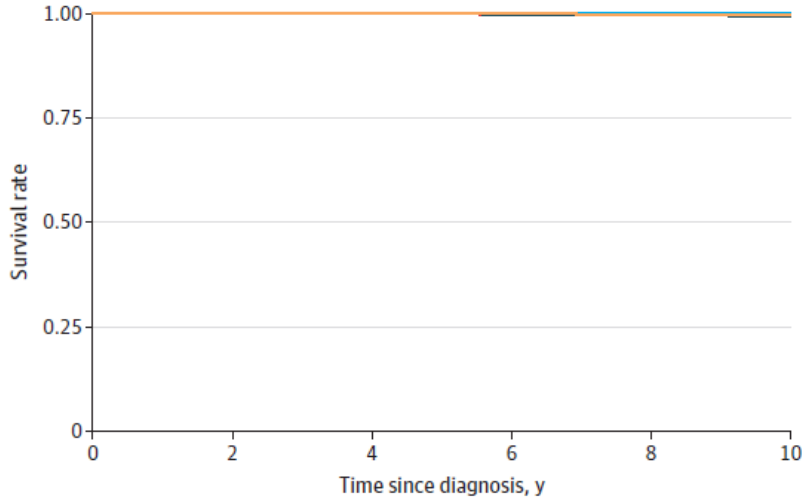
Man[n] kann an einem ISUP2-lokalisierten PCA nicht sterben.

Die Urolog*innen operieren die gesündesten Patienten.

C Favorable prognosis: prostate cancer death



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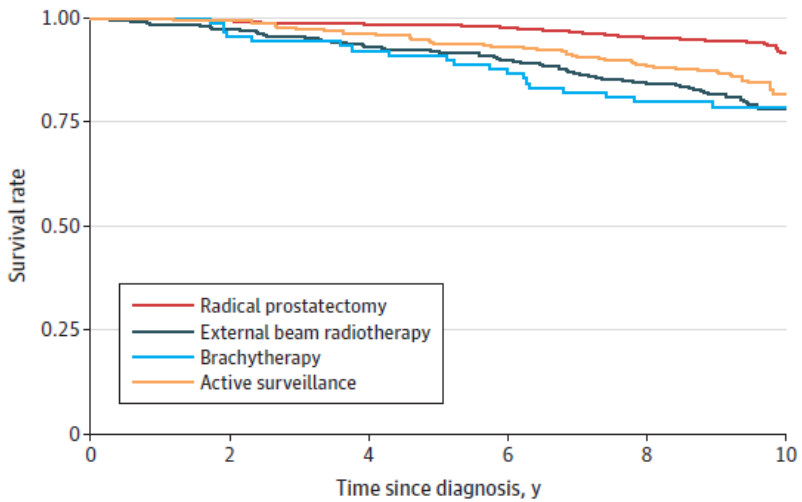

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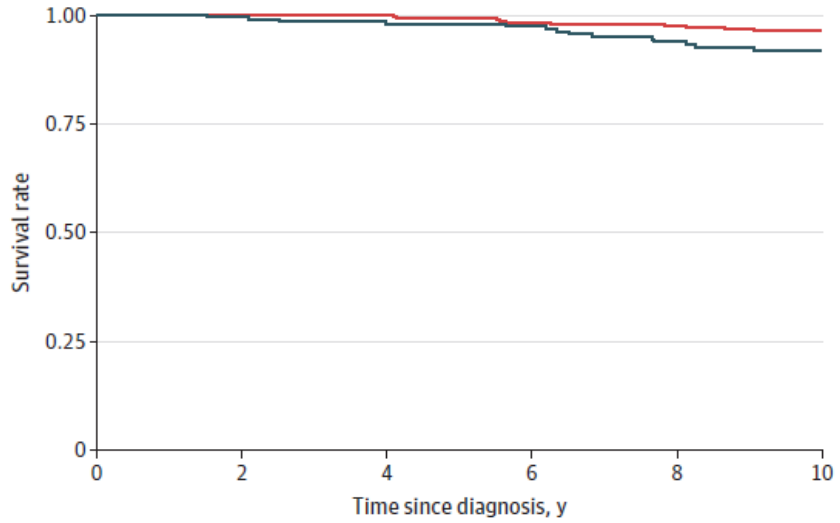
Auch beim ISUP3-lokalisierten PCA ist die Prognose exzellent.

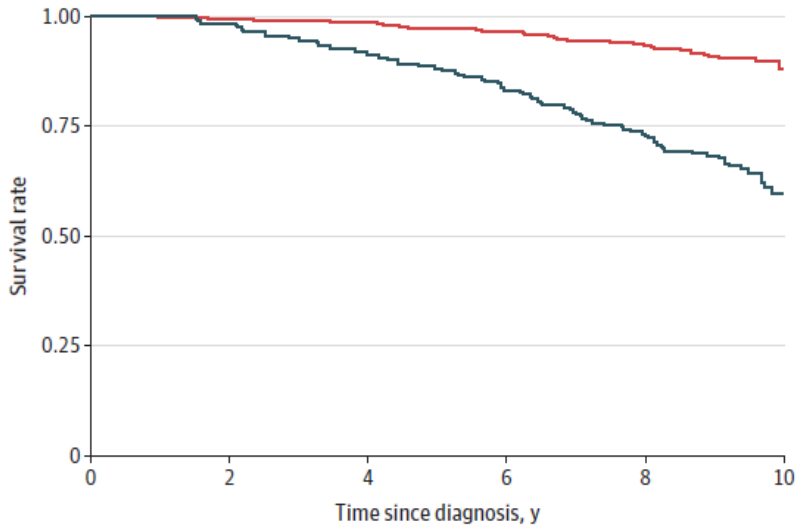
Die Urolog*innen operieren die gesündesten Patienten.

D Unfavorable prognosis: prostate cancer death



No. of patients						
Radical prostatectomy	354	351	349	339	317	40
External beam radiotherapy	201	198	184	168	145	14

B Unfavorable prognosis: all-cause death



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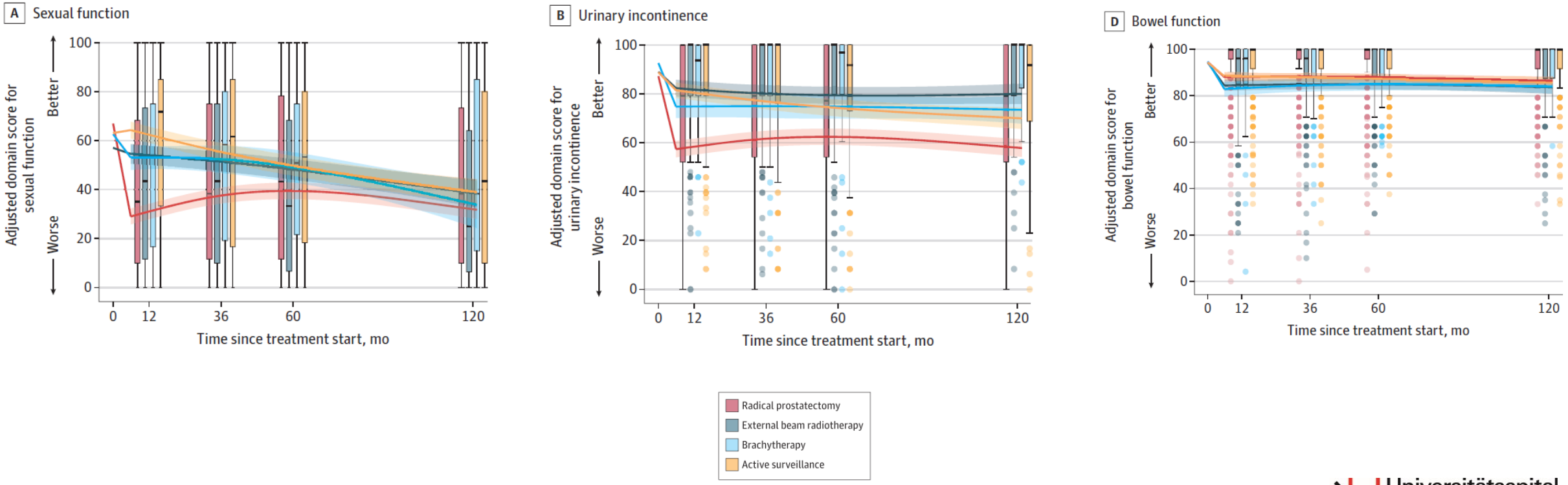
Operation und Radiotherapie unterscheiden sich in dem Ausmass und der Art der Nebenwirkungen.



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Quiz

https://tweedback.de/28ut

Radioonkologische Therapie des lokal begrenzten PCA: State of the Art 2025 - **Behandlungsregime**

Eine Antwort

1. Perkutane Strahlentherapie, normofraktioniert (z.B. 39 x 2 Gy)
2. Perkutane Strahlentherapie, moderat hypofraktioniert (z.B. 20 x 3 Gy)
3. Perkutane Strahlentherapie, ultrahypofraktioniert (z.B. 5 x 7.25 Gy)
4. Brachytherapie (HDR oder LDR) als alleinige Therapie oder in Kombination mit perkutaner Strahlentherapie

Radioonkologische Therapie des lokal begrenzten PCA: State of the Art 2025 - **Fine-Tuning**

Mehrere Antworten

1. Cone-Beam-CT (IGRT) täglich +/- Goldmarker
2. Adaptive Bestrahlung täglich
3. Fokale Dosiseskalation

Radioonkologische Therapie des lokal begrenzten PCA: State of the Art 2025 - **ADT**

Eine Antwort

1. ADT 4-6 Monate für alle Patienten
2. ADT 4-6 Monate nur für ISUP 3 u/o PSA>10 ng/ml
3. ADT 4-6 Monate nach prognostischem/prädiktivem Gewebetest

hypofraktionierte RT

- Eine normofraktionierte Radiotherapie dauerte 7-8 Wochen an
- Dosen von 1.8 – 2.0 Gy / d → Gesamtdosen von 74 bis >80 Gy

- ProstataCa-Zellen scheinen gegenüber höheren Einzeldosen besonders empfindlich zu sein →
- Hypofraktionierung (Erhöhung der Dosis pro Tag bei geringerer Gesamtdosis) = günstig im therapeutischen Fenster.

moderat hypofraktionierte RT

Studie	n. Pat.	Dosis	bPFS	UG-Tox	GI-Tox
Arcangeli	168	62 / 3.1	↔	↔	↔
Hoffman	203	72 / 2.4	na	↔	↔
Pollack	303	70.2 / 2.7	↔	↔/↑	↔
HYPRO	804	64.6 / 3.4	↔	(↑)	(↑)
RTOG 0415	1092	70 / 2.5	↔	(↑)	↑
PROFIT	**1206**	**60 / 3**	↔	↔	**akut: ↑ spät: ↓**
CHHiPP	**3216**	**60 / 3 or 57 / 3**	↔ ↓	↔	**akut: ↑ spät: ↔**

Insgesamt:

- etwas mehr akute GU & GI-Toxizität
- keine Unterschiede in der Langzeittoxizität
- Standard of Care seit Jahren

ultrahypofraktionierte RT

Ultra-hypofractionated versus conventionally fractionated radiotherapy for prostate cancer: 5-year outcomes of the HYPO-RT-PC randomised, non-inferiority, phase 3 trial

Anders Widmark, Adalsteinn Gunnlaugsson, Lars Beckman, Camilla Thellenberg-Karlsson, Morten Hoyer, Magnus Lagerlund, Jon Kindblom, Claes Ginman, Bengt Johansson, Kirsten Björnlinger, Mihajl Seke, Måns Agrup, Per Fransson, Björn Tavelin, David Norman, Björn Zackrisson, Harald Anderson, Elisabeth Kjellén, Lars Franzén, Per Nilsson

Intensity-modulated fractionated radiotherapy versus stereotactic body radiotherapy for prostate cancer (PACE-B): acute toxicity findings from an international, randomised, open-label, phase 3, non-inferiority trial

Douglas H Brand, Alison C Tree*, Peter Ostler, Hans van der Voet, Andrew Loblaw, William Chu, Daniel Ford, Shaun Tolan, Suneil Jain, Alexander Martin, John Staffurth, Philip Camilleri, Kiran Kancherla, John Frew, Andrew Chan, Ian S Dayes, Daniel Henderson, Stephanie Brown, Clare Cruickshank, Stephanie Burnett, Aileen Duffton, Clare Griffin, Victoria Hinder, Kirsty Morrison, Olivia Naismith, Emma Hall, Nicholas van As, on behalf of the PACE Trial Investigators*

ORIGINAL ARTICLE

Phase 3 Trial of Stereotactic Body Radiotherapy in Localized Prostate Cancer

N. van As, C. Griffin, A. Tree, J. Patel, P. Ostler, H. van der Voet, A. Loblaw, W. Chu, D. Ford, S. Tolan, S. Jain, P. Camilleri, K. Kancherla, J. Frew, A. Chan, O. Naismith, J. Armstrong, J. Staffurth, A. Martin, I. Dayes, P. Wells, D. Price, E. Williamson, J. Pugh, G. Manning, S. Brown, S. Burnett, and E. Hall

Randomisierter Vergleich zwischen

- normo-/moderat hypofraktionierter

und

- ultrahypofraktionierter Radiotherapie

ultrahypofraktionierte RT: PACE-B

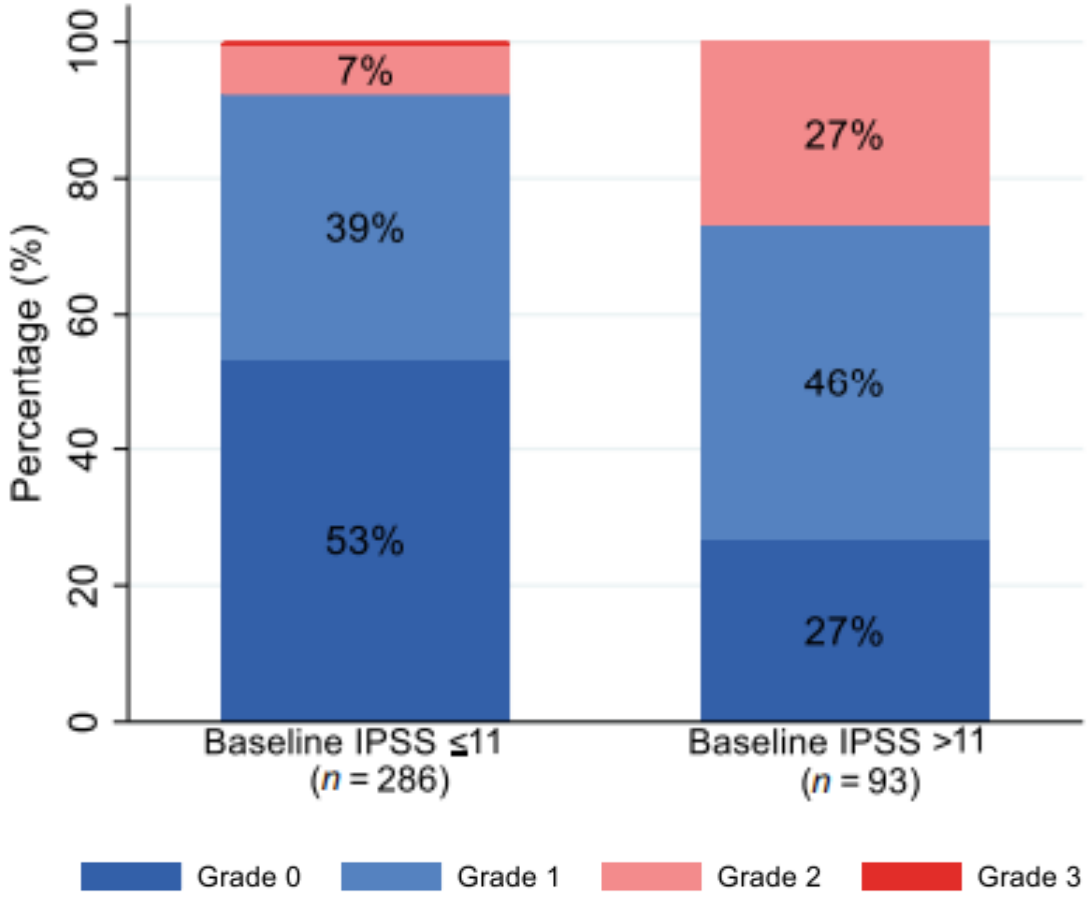
- sehr hohe Wirksamkeit: 5J bpFS **95.8%** mit SBRT
- Etwas mehr GU-Spättoxizität

Grade 2+ events	Cumulative events n (%)	Estimated proportion by 5 years%	HR (95% CI)	p-values
RTOG GU				
CRT	76/433 (17.6)	18.3 (14.8, 22.5)	1.59 (1.18, 2.12)	<0.001
SBRT	109/415 (26.3)	26.9 (22.8, 31.5)		
RTOG GI				
CRT	45/433 (10.4)	10.2 (7.7, 13.5)	1.03 (0.68, 1.56)	0.94
SBRT	45/415 (10.8)	10.7 (8.1, 14.2)		
CTCAE GU				
CRT	126/433 (29.1)	29.8 (25.5, 34.5)	1.58 (1.25, 1.98)	<0.001
SBRT	175/415 (42.2)	42.5 (37.8, 47.5)		
CTCAE GI				
CRT	83/433 (19.2)	18.7 (15.2, 22.8)	0.96 (0.71, 1.31)	0.81
SBRT	77/415 (18.6)	18.8 (15.3, 23.0)		

ultrahypofraktionierte RT: Gründe für GU-Spättoxizität

Exploring Factors Associated with Late Urinary Toxicity After Prostate Stereotactic Body Radiotherapy: Findings from the PACE-B Study

Ragu Ratnakumaran [a,b,], Douglas H. Brand [c], Archana Sasitharan [b], Jonathan Mohajer [a], Victoria Hinder [d], Asadullah Khan [a], Hira Mayet [b], Andrew Loblaw [e], Emma Hall [d], Nicholas van As [a,b], Alison C. Tree [a,b], on behalf of the PACE Trial Investigators*



Drei Faktoren identifiziert:

- höhere baseline IPSS
- Baseline-Medikation für LUTS
- akute GU-Toxizität ≥°II

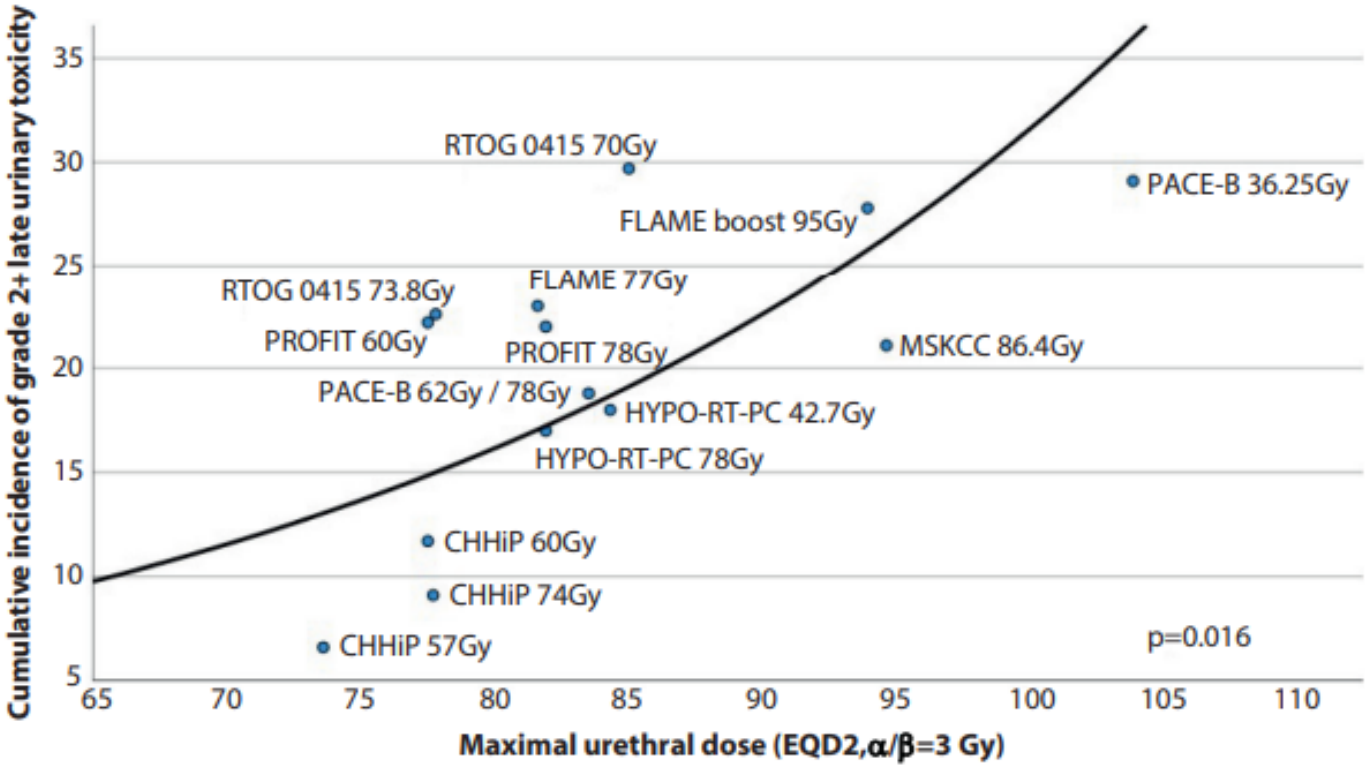
ultrahypofraktionierte RT: auf die Urethra achten!

Radiation Dose to the Intraprostatic Urethra Correlates Strongly With Urinary Toxicity After Prostate Stereotactic Body Radiation Therapy: A Combined Analysis of 23 Prospective Clinical Trials

Jonathan E. Leeman, MD,* Yu-Hui Chen, MS,† Paul Catalano, ScD,†
Jeremy Bredfeldt, PhD,* Martin King, MD, PhD,*
Kent W. Mouw, MD, PhD,* Anthony V. D'Amico, MD, PhD,*
Peter Orio, DO,* Paul L. Nguyen, MD,* and Neil Martin, MD, MPH*

Intraprostatic Urethra: The New Kid on the Block for Prostate Cancer Radiation Therapy?

Thomas Zilli, MD,[a,b] Vérane Achard, MD, PhD,[a,b] and Jennifer Le Guevelou, MD[a,b]



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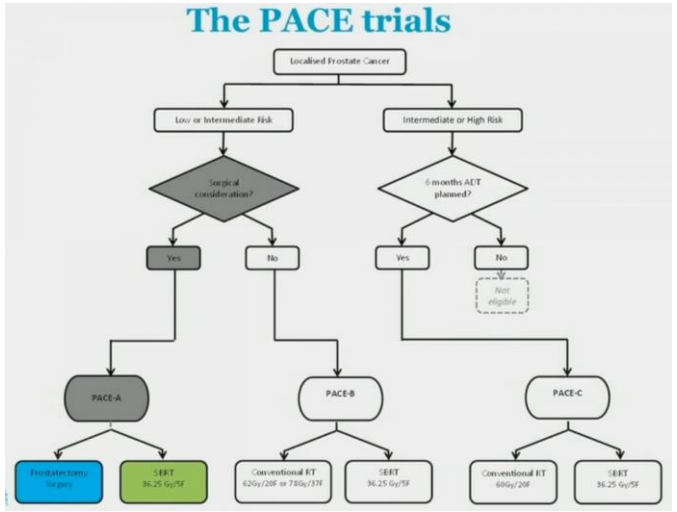
ultrahypofraktionierte RT: Vergleich mit Chirurgie

Radical Prostatectomy Versus Stereotactic Radiotherapy for Clinically Localised Prostate Cancer: Results of the PACE-A Randomised Trial

Nicholas van As [a,b,], Binnaz Yasar [a,b], Clare Griffin [b], Jaymini Patel [b], Alison C. Tree [a,b], Peter Ostler [c], Hans van der Voet [d], Daniel Ford [e], Shaun Tolan [f], Paula Wells [g], Rana Mahmood [h], Mathias Winkler [i], Andrew Chan [j], Alan Thompson [a], Chris Ogden [a], Olivia Naismith [a,k], Julia Pugh [b], Georgina Manning [b], Stephanie Brown [b], Stephanie Burnett [b], Emma Hall [b]*



- Endpunkt: Toxizität!
  - ➢ Anzahl Einlagen/d
  - ➢ Darmfunktion anhand EPIC-26
- n=123; schwierige Rekrutierung!

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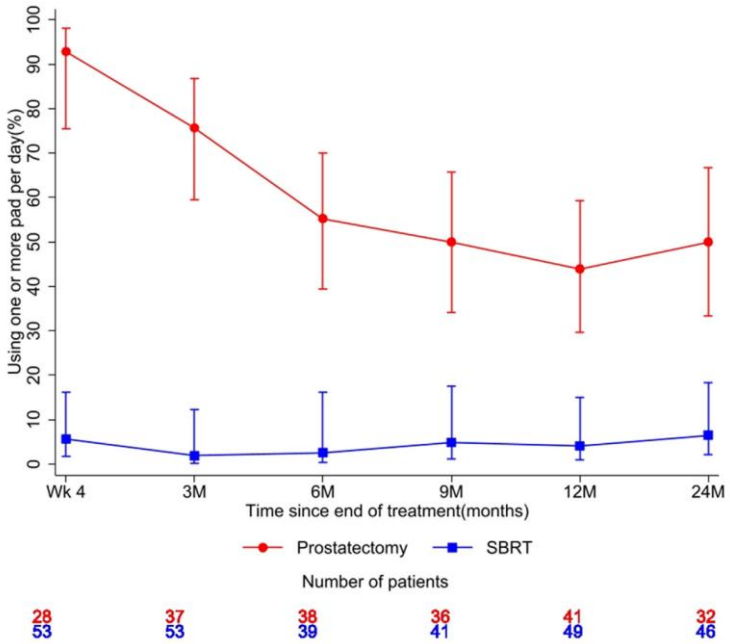
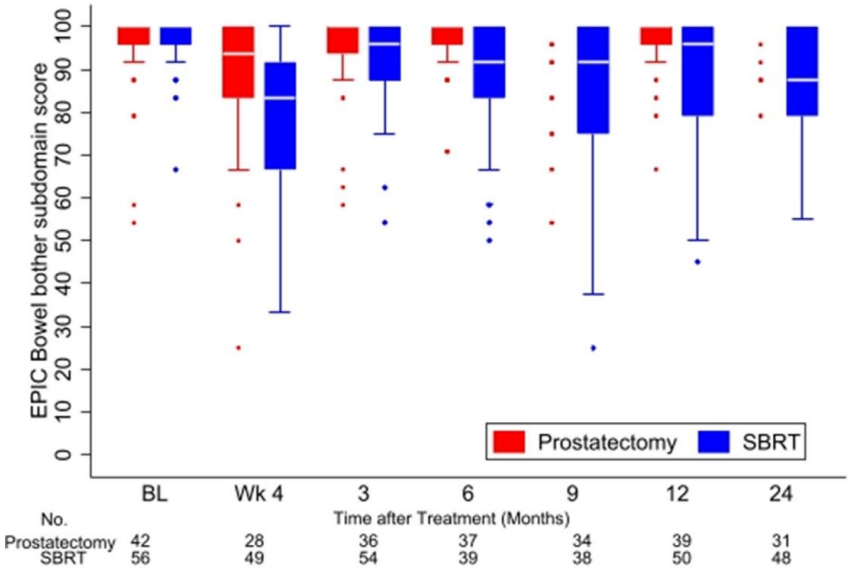
Radical Prostatectomy Versus Stereotactic Radiotherapy for Clinically Localised Prostate Cancer: Results of the PACE-A Randomised Trial

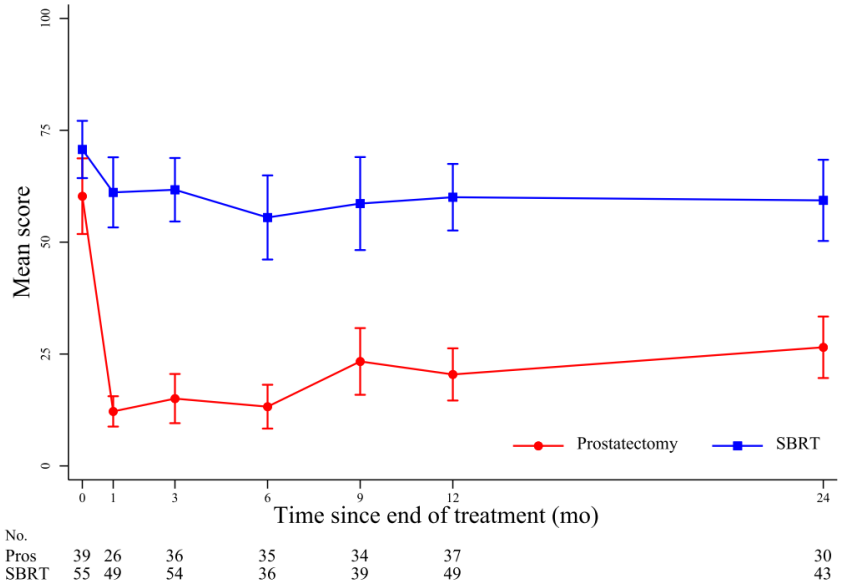
Nicholas van As [a,b,], Binnaz Yasar [a,b], Clare Griffin [b], Jaymini Patel [b], Alison C. Tree [a,b], Peter Ostler [c], Hans van der Voet [d], Daniel Ford [e], Shaun Tolan [f], Paula Wells [g], Rana Mahmood [h], Mathias Winkler [i], Andrew Chan [j], Alan Thompson [a], Chris Ogden [a], Olivia Naismith [a,k], Julia Pugh [b], Georgina Manning [b], Stephanie Brown [b], Stephanie Burnett [b], Emma Hall [b]*



Einlagen/d



EPIC26 - Bowel Domain



EPIC26 - Sexual Domain

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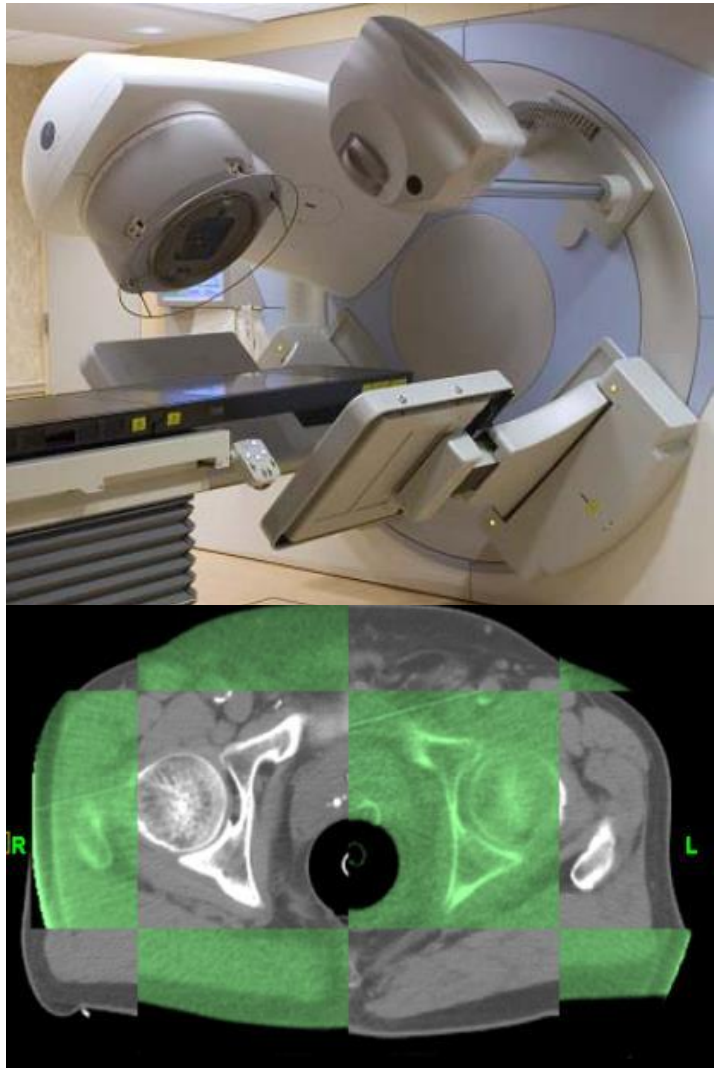
Cone-Beam-CT (IGRT) täglich +/- Goldmarker

Daily Versus Weekly Prostate Cancer Image Guided Radiation Therapy: Phase 3 Multicenter Randomized Trial

Renaud de Crevoisier, MD, PhD,* Mohamed Amine Bayar, PhD,†,‡
Pascal Pommier, MD, PhD,§ Xavier Muracciole, MD,‖
Françoise Pêne, MD,¶,# Philippe Dudouet, MD,** Igor Latorzeff, MD,††
Véronique Beckendorf, MD,‡‡ Jean-Marc Bachaud, MD,§§
Agnès Laplanche, MD, PhD,† Stéphane Supiot, MD, PhD,‖‖
Bruno Chauvet, MD,¶¶ Tan-Dat Nguyen, MD, PhD,##
Alberto Bossi, MD,*** Gilles Créhange, MD, PhD,†††
and Jean Léon Lagrange, MD, PhD‡‡‡



Tägliche Bildgebung:

- Weniger GI Akut- und Spättoxizität
- Höhere bPFS-Rate

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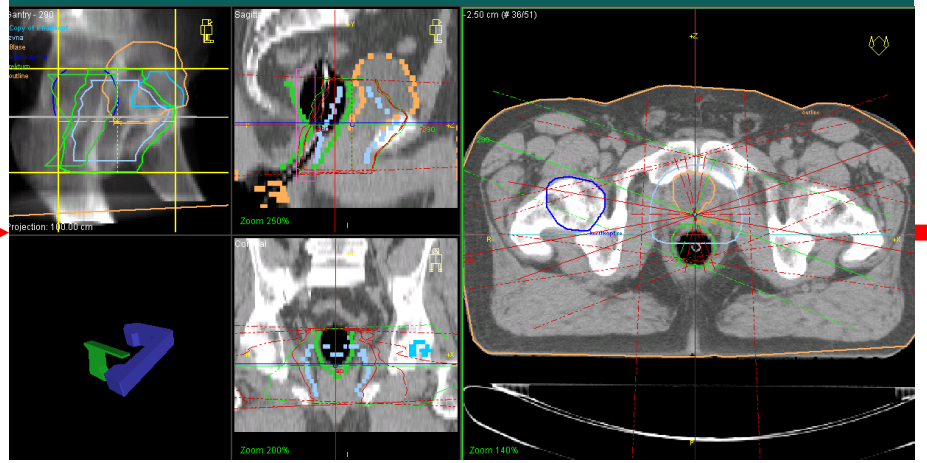
Üblicher Ablauf einer Strahlentherapie

Planungs-CT

Bestrahlungsplanung

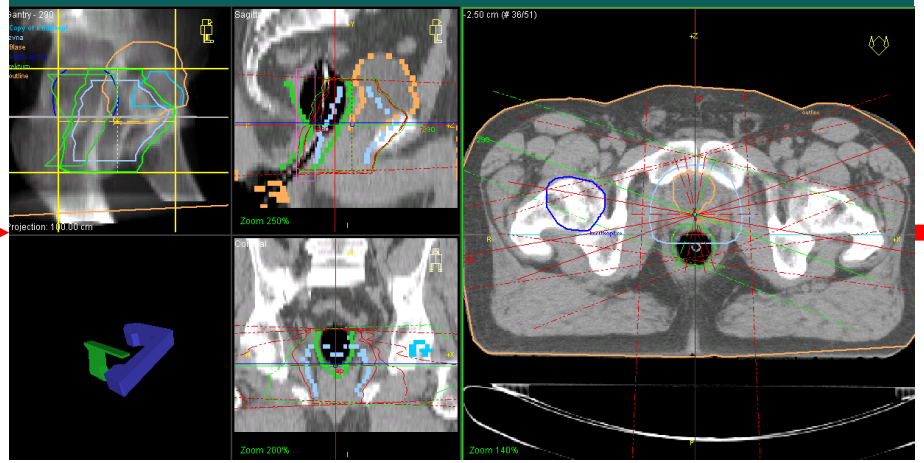


tägliche Bestrahlungen

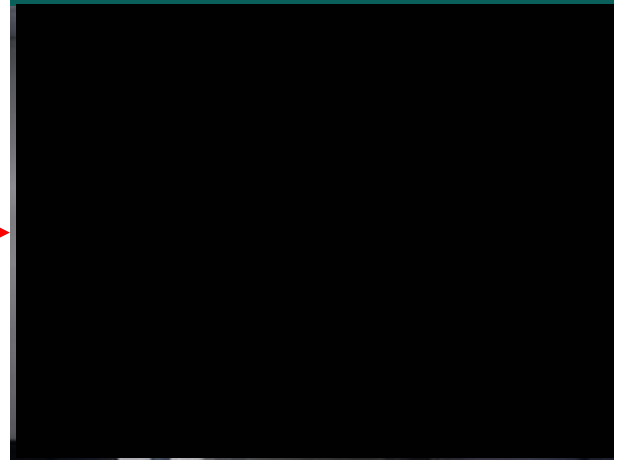
Üblicher Ablauf einer Strahlentherapie

Planungs-CT

Bestrahlungsplanung



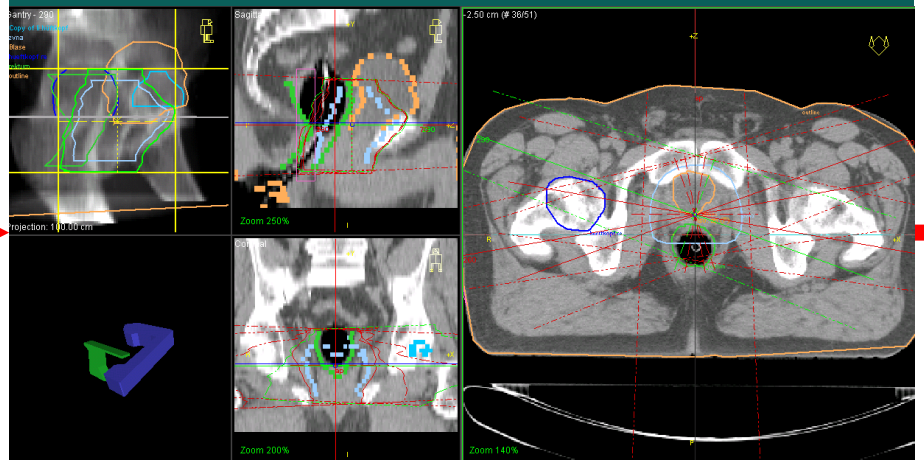
tägliche Bestrahlungen



Üblicher Ablauf einer Strahlentherapie

Planungs-CT

Bestrahlungsplanung



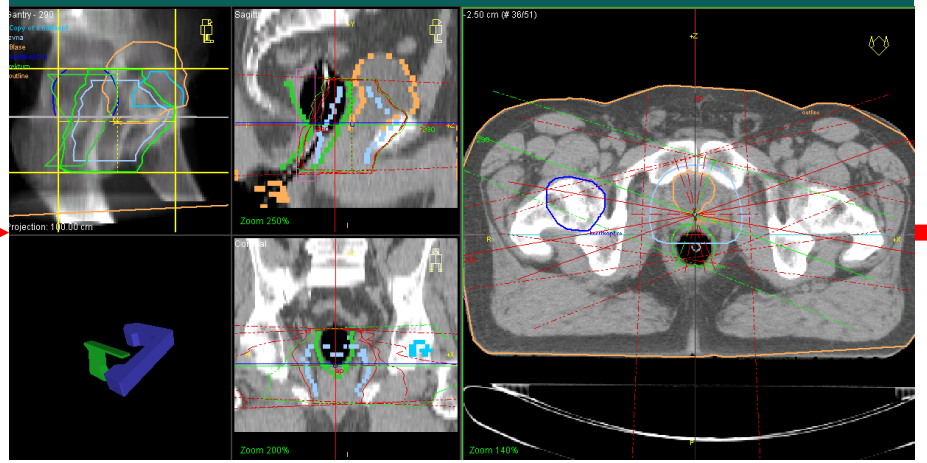
tägliche Bestrahlungen

Umplanung nötig

Adaptive Strahlentherapie: CT-basiert

Planungs-CT

Bestrahlungsplanung

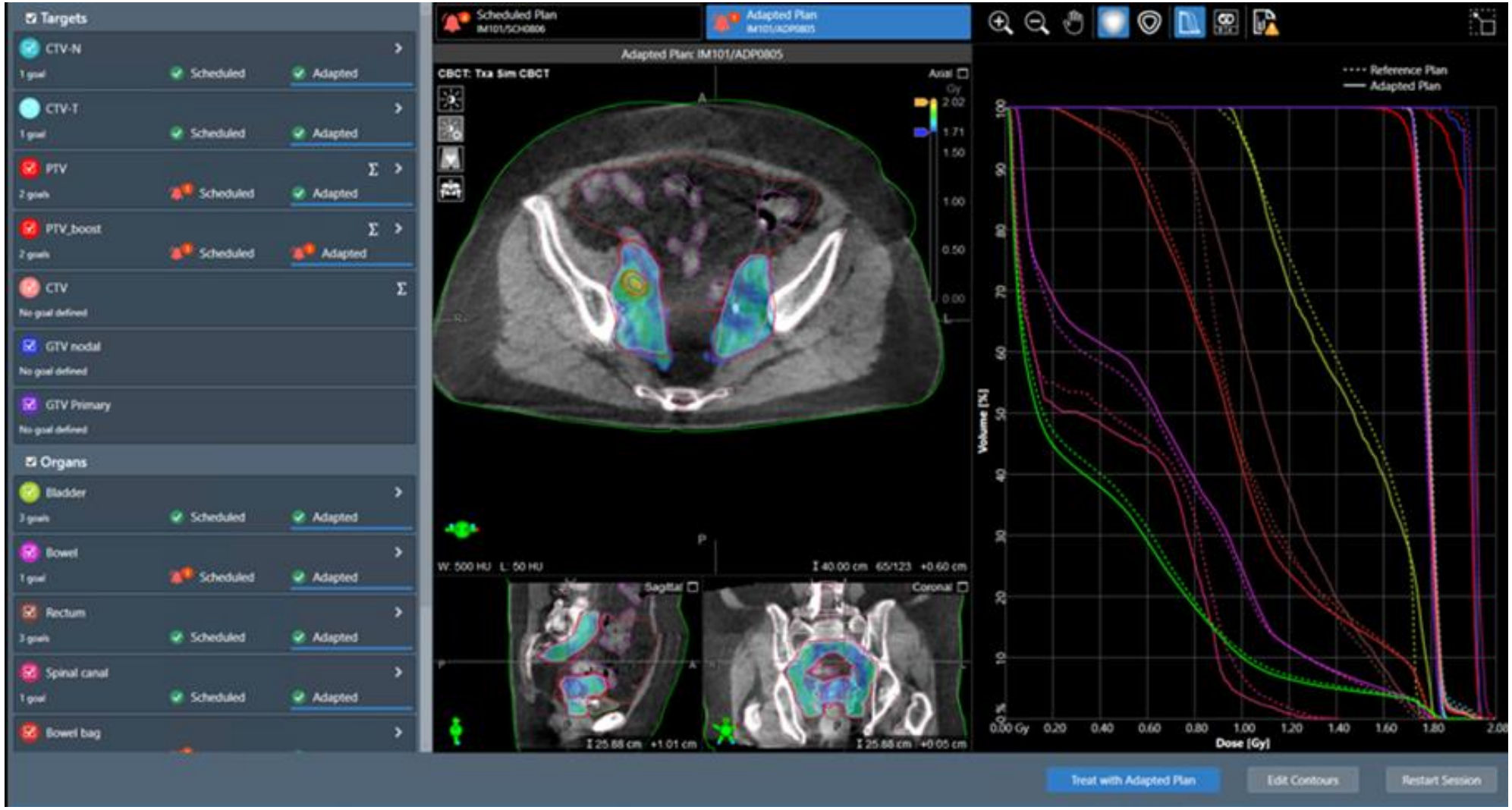


tägliche Bestrahlungen

Tägliche Anpassung der Therapie an die **individuelle Anatomie**

→ **täglich neuer Bestrahlungsplan**

Adaptive Strahlentherapie: CT-basiert



Auswahl zwischen **geplantem** und **neuem** RT-Plan möglich

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Adaptive Strahlentherapie

- Bislang v.a. dosimetrische Studien und wenige Daten zur Akuttoxizität, z.B.

Original Article Radiotherapy and Oncology 213 (2025) 111207

CT online adaptive radiotherapy is associated with dosimetric and acute toxicity improvements in prostate cancer treatment

Lin L. Zhu [a], Jeremy S. Bredfeldt [b], Yue-Houng Hu [b], Cindy Hancox [b], Christian V. Guthier [b], Sarah Quirk [b], Jennifer Pursley [c], Sophia C. Kamran [c], David McClatchy [c], Paul L. Nguyen [b], Anthony V. D'Amico [b], Mutlay Sayan [b], Ellen Kim [b], Kent W. Mouw [b], Martin T. King [b], Neil E. Martin [b], Jonathan E. Leeman [b,*]

Dosimetric assessment of online adaptive radiotherapy in the treatment of prostate cancer on the ethos accelerator

Krzysztof Ślosarek[1], Aleksander Zajusz[2], Iwona Dębosz-Suwińska[2], Barbara Bekman[1]

Daily Adaptive RadioTherapy in Postoperative HypofrActionated Salvage radiothERapy for Prostate Cancer Patients (DART-PHASER): Early Clinical and Dosimetric Results

L. Nicosia,[1] R.F. Borgese,[2] N. Bianchi,[2] C. Orsatti,[2] A.G. Allegra,[2] M. Corsi,[3] C. De-Colle,[2] A. De Simone,[1] N. Giaj-Levra,[2] D. Gurrera,[2] S. Naccarato,[2] E. Pastorello,[2] F. Ricchetti,[2] M. Rigo,[2] A. Romei,[2] G. Sicignano,[2] R. Ruggieri,[1] and F. Alongi[2]

Online adaptive radiotherapy potentially reduces toxicity for high-risk prostate cancer treatment

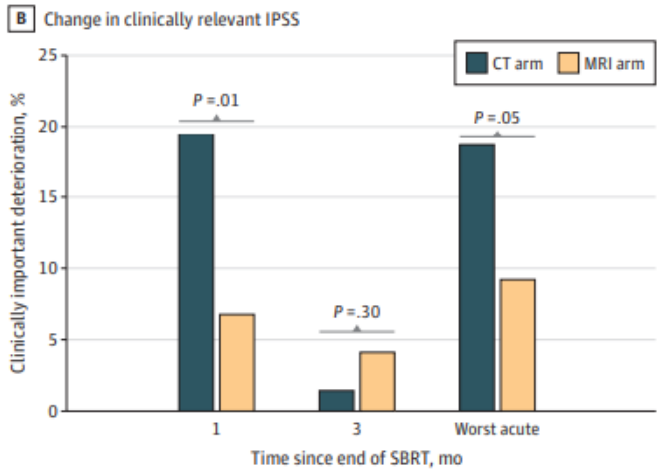
Rasmus Lübeck Christiansen [a,b,*], Lars Dysager [c], Christian Rønn Hansen [a,b], Henrik Robenhagen Jensen [b], Tine Schytte [a,c], Christina Junker Nyborg [c], Anders Smedegaard Bertelsen [b], Søren Nielsen Agergaard [b], Faisal Mahmood [a,b], Steinbjørn Hansen [c], Olfred Hansen [a,c], Carsten Brink [a,b], Uffe Bernchou [a,b]

Adaptive Strahlentherapie

JAMA Oncology | Original Investigation

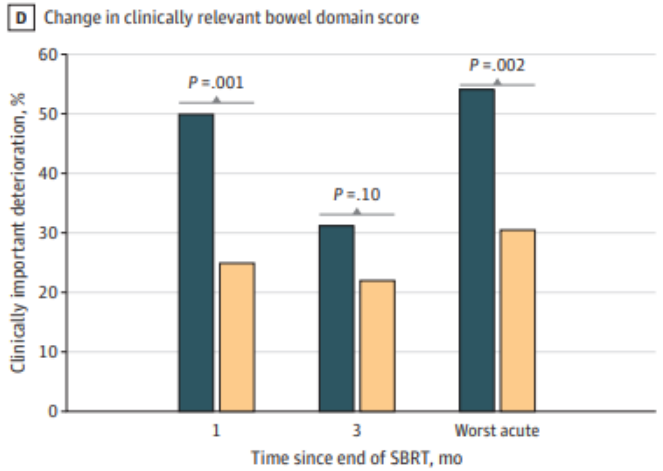
Magnetic Resonance Imaging–Guided vs Computed Tomography–Guided Stereotactic Body Radiotherapy for Prostate Cancer
The MIRAGE Randomized Clinical Trial

Amar U. Kishan, MD; Ting Martin Ma, MD, PhD; James M. Lamb, PhD; Maria Casado, BS; Holly Wilhalme, MSc; Daniel A. Low, PhD; Ke Sheng, PhD; Sahil Sharma, BS; Nicholas G. Nickols, MD, PhD; Jonathan Pham, PhD; Yingli Yang, PhD; Yu Gao, PhD; John Neylon, PhD; Vincent Basehart, BS; Minsong Cao, PhD; Michael L. Steinberg, MD



- Adaptive Bestrahlung
- Verkleinerung der Sicherheitssäume
- Echtzeit-Tracking des Zielvolumens

→ weniger akute GU & GI Toxizität



Fokale Dosiseskalation

Focal Boost to the Intraprostatic Tumor in External Beam Radiotherapy for Patients With Localized Prostate Cancer: Results From the FLAME Randomized Phase III Trial

Linda G. W. Kerkmeijer, MD, PhD[1,2]; Veerle H. Groen, MD[1]; Floris J. Pos, MD, PhD[3]; Karin Haustermans, MD, PhD[4]; Evelyn M. Monninkhof, PhD[5]; Robert Jan Smeenk, MD, PhD[2]; Martina Kunze-Busch, PhD[2]; Johannes C. J. de Boer, PhD[1]; Jochem van der Voort van Zijp, MD, PhD[1]; Marco van Vulpen, MD, PhD[6]; Cédric Draulans, MD, PhD[4]; Laura van den Bergh, MD, PhD[7]; Sofie Isebaert, PhD[4]; and Uulke A. van der Heide, PhD[3]

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- > 60% T3/T4
- > 30% ISUP 4
- mean PSA >15 ng/ml

Standard and Hypofractionated Dose Escalation to Intraprostatic Tumor Nodules in Localized Prostate Cancer: 5-Year Efficacy and Toxicity in the DELINEATE Trial

Alison C. Tree, MD,[*,†] Laura Satchwell, MSc,[*] Emma Alexander, FRCR,[*] Irena Blasiak-Wal, MSc,[*] Nandita M deSouza, FRCR,[†] Annie Gao, MSc,[*] Emily Greenlay, MSc,[*] Helen McNair, PhD,[*,†] Chris Parker, FRCR,[*,†] James Talbot, MSc,[*] David Dearnaley, FRCR,[†,*] and Julia Murray, FRCR[*,†]

- > 50% T2 (MRI-basiert)
- 95% ISUP 1/2/3
- PSA ≈ 10 ng/ml

Fokale Dosiseskalation

Standard and Hypofractionated Dose Escalation to Intraprostatic Tumor Nodules in Localized Prostate Cancer: 5-Year Efficacy and Toxicity in the DELINEATE Trial

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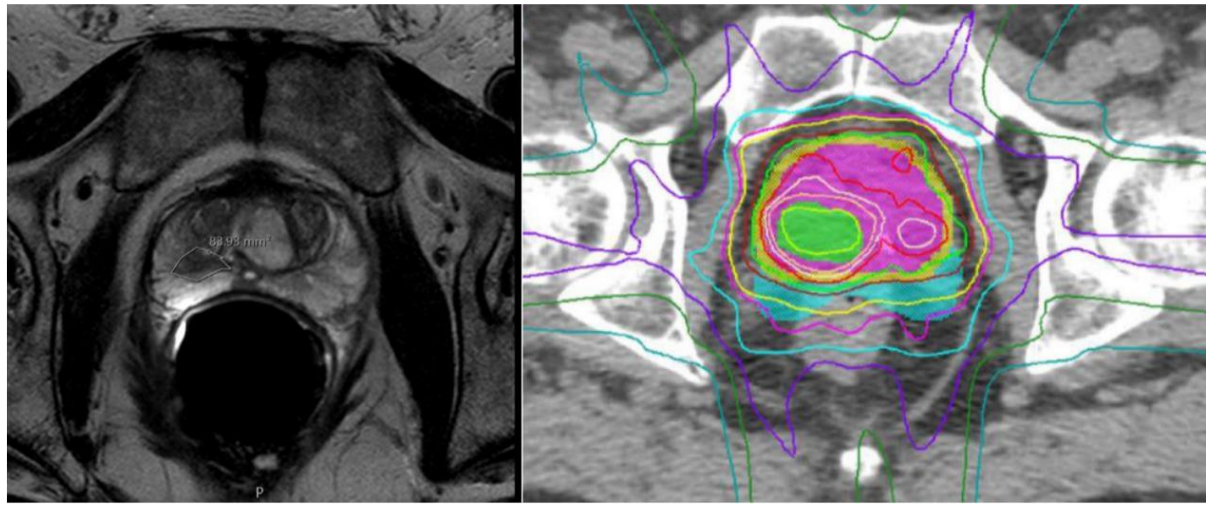
- gute Machbarkeit
- sehr gute Verträglichkeit
- exzellente Tumorkontrolle (>95%)



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ADT - Dauer

Androgen deprivation therapy use and duration with definitive radiotherapy for localised prostate cancer: an individual patient data meta-analysis

Amar U Kishan, Yilun Sun*, Holly Hartman, Thomas M Pisansky, Michel Bolla, Anouk Neven, Allison Steigler, James W Denham, Felix Y Feng, Almudena Zapatero, John G Armstrong, Abdenour Nabid, Nathalie Carrier, Luis Souhami, Mary T Dunne, Jason A Efstathiou, Howard M Sandler, Araceli Guerrero, David Joseph, Philippe Maingon, Theo M de Reijke, Xavier Maldonado, Ting Martin Ma, Tahmineh Romero, Xiaoyan Wang, Matthew B Rettig, Robert E Reiter, Nicholas G Zaorsky, Michael L Steinberg, Nicholas G Nickols, Angela Y Jia, Jorge A Garcia, Daniel E Spratt, the MARCAP Consortium group†*

ADT - Dauer

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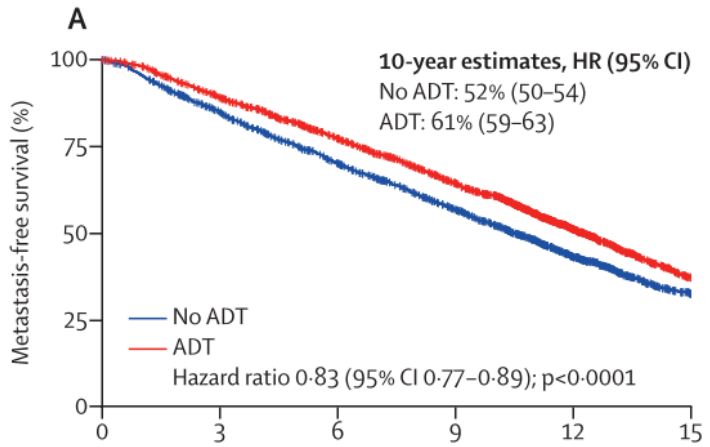
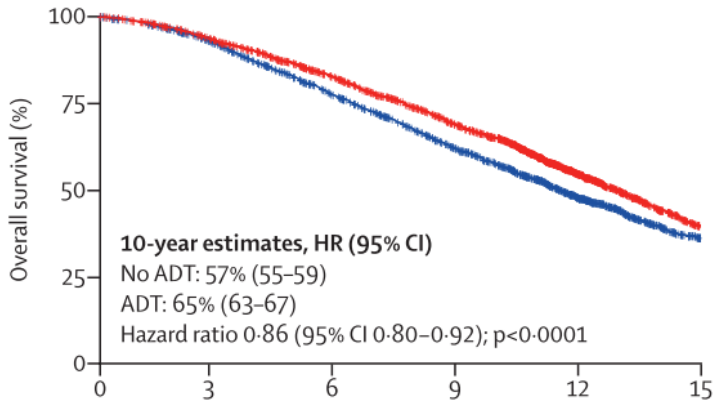
ADT use				
NCCN risk group	..	..	..	0·091
High	1647	0·72 (0·64–0·82)	<0·0001	..
Intermediate	2427	0·84 (0·75–0·93)	0·0014	..
Radiotherapy dose	..	..	..	0·96
High (≥74 Gy)	1018	0·83 (0·68–1·01)	0·063	..
Low (<74 Gy)	4118	0·83 (0·76–0·89)	<0·0001	..
Age, years	..	..	..	0·088
<70	2419	0·77 (0·69–0·87)	<0·0001	..
≥70	2716	0·88 (0·80–0·97)	0·0080	..



Number at risk (number censored)						
No ADT (1600 events)	2576 (2)	2128 (63)	1695 (133)	1289 (224)	722 (514)	335 (761)
ADT (1399 events)	2555 (4)	2226 (56)	1828 (166)	1415 (282)	754 (689)	332 (951)



Number at risk (number censored)						
No ADT (1489 events)	2579 (2)	2304 (64)	1848 (147)	1392 (245)	782 (576)	353 (862)
ADT (1316 events)	2557 (4)	2314 (58)	1937 (172)	1509 (292)	796 (739)	344 (1024)

ADT - Dauer

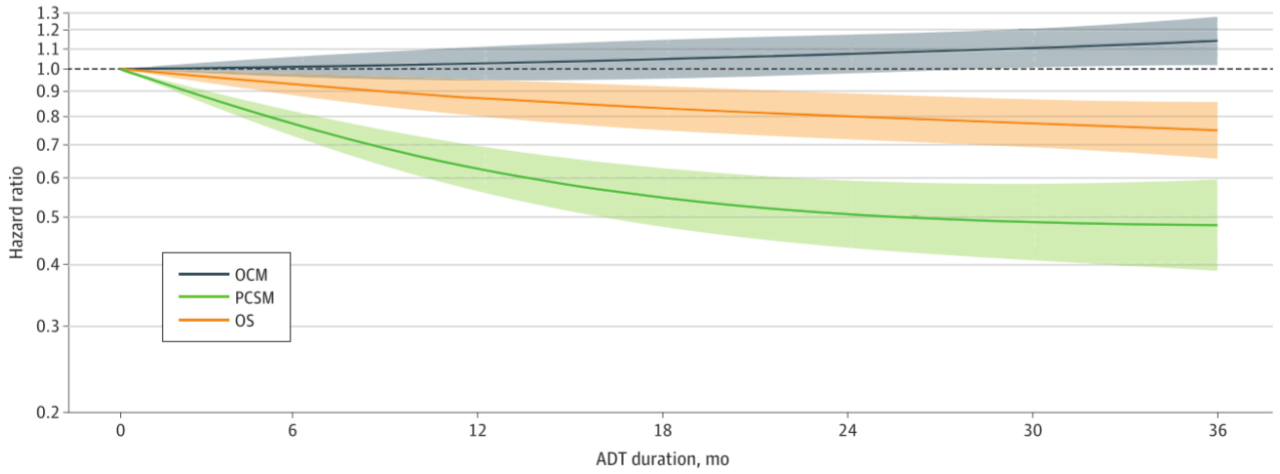
JAMA Oncology | Original Investigation

Optimal Duration of Androgen Deprivation Therapy With Definitive Radiotherapy for Localized Prostate Cancer

A Meta-Analysis

Nicholas G. Zaorsky, MD, MS; Yilun Sun, PhD; Abdenour Nabid, MD; Almudena Zapatero, MD, PhD; Michel Bolla, MD; David Joseph, MD; Philippe Maingon, MD; Araceli Guerrero, MD; Ana Alvarez Gonzalez, MD; Carmen Gonzalez San-Segundo, MD, PhD; Maria Ángeles Cabeza Rodríguez, MD; Josep Maria Sole, MD; Agustí Pedro Olivé, MD; Allison Steigler, BMath; Luis Souhami, MD; Nathalie Carrier, MSc; John G. Armstrong, MD; Charles Gillham, MD; Thomas M. Pisansky, MD; Matthew Schipper, PhD; Howard M. Sandler, MD; Jason A. Efstathiou, MD, DPhil; Colleen Lawton, MD; Theo M. de Reijke, MD; Gerhardt Attard, MD; Soumyajit Roy, MD; Scott C. Morgan, MD; Shawn Malone, MD; William A. Hall, MD; Paul L. Nguyen, MD; Jonathan E. Shoag, MD; Randy A. Vince Jr, MD; Adam Calaway, MD; Jorge A. Garcia, MD; Pedro C. Barata, MD; Prateek Mendiratta, MD; Jason R. Brown, MD; Luca Valle, MD; Matthew Rettig, MD; Robert T. Dess, MD; William C. Jackson, MD; Ting Martin, Ma, MD, PhD; Angela Y. Jia, MD, PhD; Michael Steinberg, MD; Tahmineh Romero, MS; Amar U. Kishan, MD; Daniel E. Spratt, MD

Figure 3. Overall Survival (OS), Prostate Cancer–Specific Mortality (PCSM), and Other-Cause Mortality (OCM) as Functions of Androgen Deprivation Therapy (ADT) Duration as a Continuous Variable in Smoothed Spline Models



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ADT - Dauer

JAMA Oncology | Original Investigation

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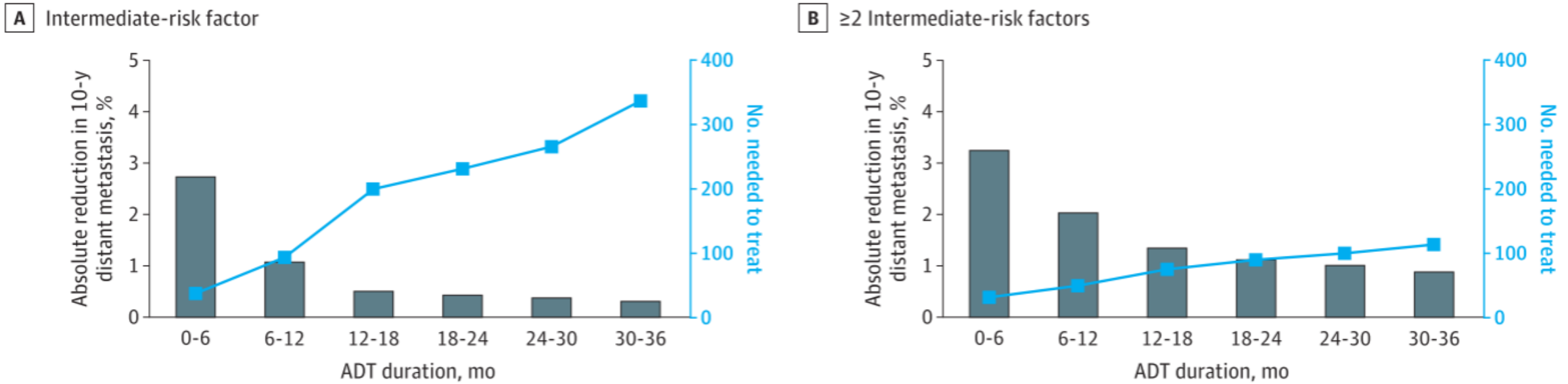

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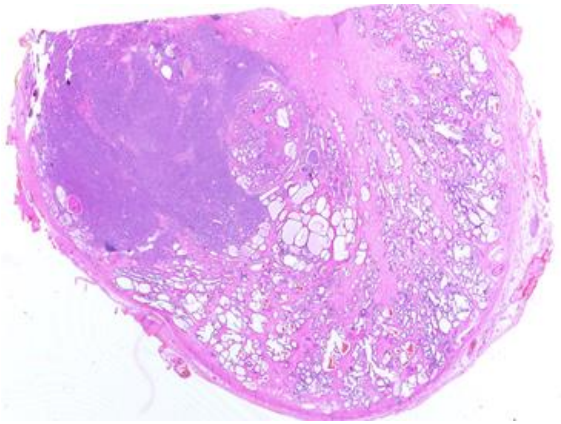
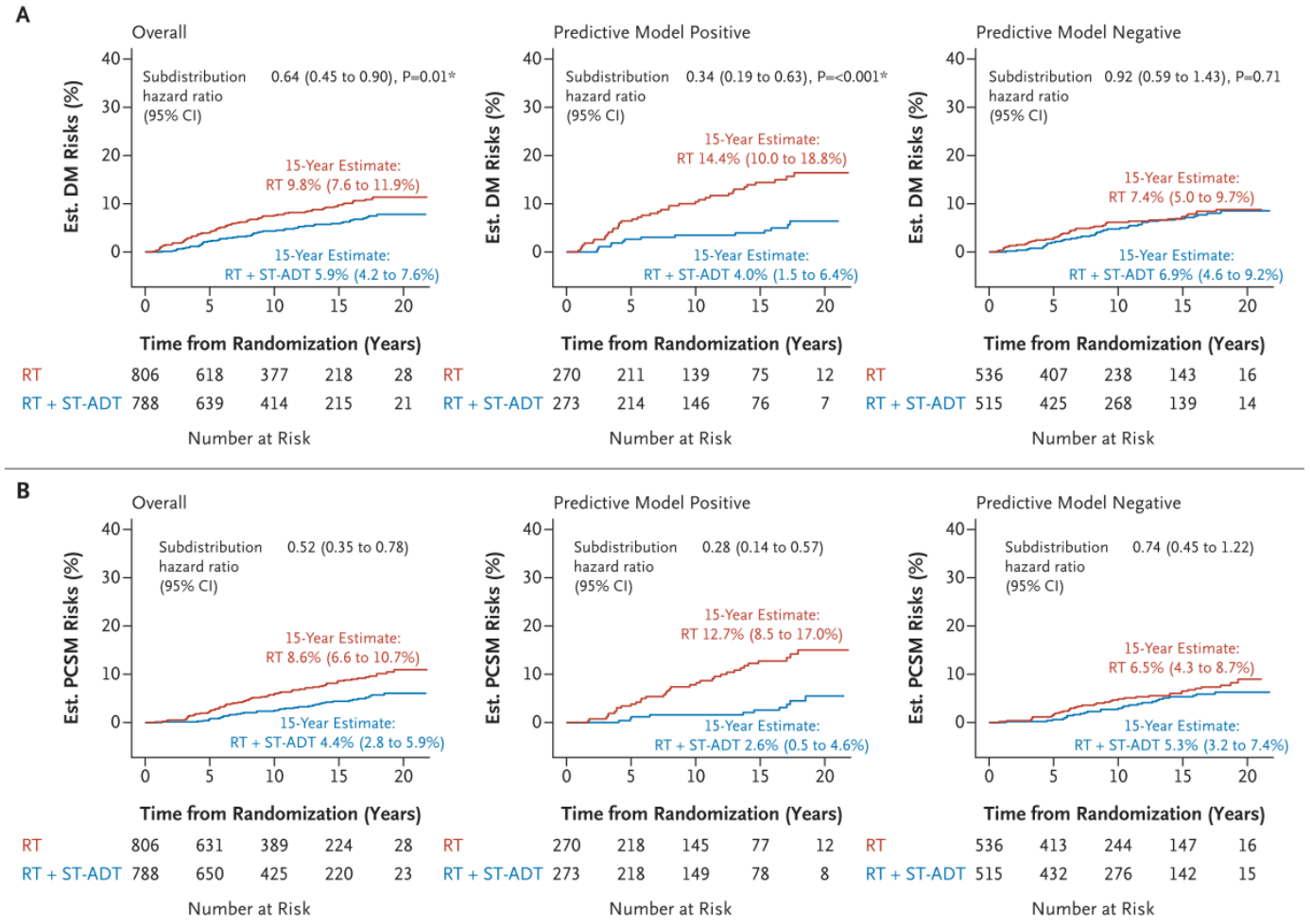
ADT - Selektion

Artificial Intelligence Predictive Model for Hormone Therapy Use in Prostate Cancer

Daniel E. Spratt, M.D.,[1] Siyi Tang, Ph.D.,[2,3] Yilun Sun, Ph.D.,[1,4] Huei-Chung Huang, M.A.,[3] Emmalyn Chen, Ph.D.,[3] Osama Mohamad, M.D., Ph.D.,[5] Andrew J. Armstrong, M.D.,[6] Jonathan D. Tward, M.D., Ph.D.,[7] Paul L. Nguyen, M.D.,[8] Joshua M. Lang, M.D., M.Sc.,[9] Jingbin Zhang, M.Sc.,[3] Akinori Mitani, M.D., Ph.D.,[3] Jeffry P. Simko, M.D., Ph.D.,[5] Sandy DeVries, M.A.,[10] Douwe van der Wal, M.Sc.,[3] Hans Pinckaers, M.D., M.Sc.,[3] Jedidiah M. Monson, M.D.,[11] Holly A. Campbell, M.D.,[12] James Wallace, M.D.,[13] Michelle J. Ferguson, M.D.,[14] Jean-Paul Bahary, M.D.,[15] Edward M. Schaeffer, M.D., Ph.D.,[16] Howard M. Sandler, M.D.,[17] Phuoc T. Tran, M.D., Ph.D.,[18] Joseph P. Rodgers, M.S.,[19,20] Andre Esteva, Ph.D.,[3] Rikiya Yamashita, M.D., Ph.D.,[3] and Felix Y. Feng, M.D.,[5] on behalf of NRG Prostate Cancer AI Consortium*





State of the Art 2025 radioonkologische Therapie des lokalisierten PCA bedeutet (für mich)

- moderat hypofraktionierte / ultrahypofraktionierte Radiotherapie
- IGRT mit Photonen
- fokale Dosiseskalation
- ADT 4-6 Monate für unfavorable-intermediate Risk

Ich erwarte bald mehr Daten bzgl.

- noch fortgeschrittener Arten der Bestrahlung
- Selektion für ADT

Universitätsspital Basel

Ich freue mich auf Ihre Fragen!

alexandros.papachristofilou@usb.ch