



*La malattia organo confinata e  
localmente avanzata  
La scelta del trattamento:  
**Radioterapia***

**FILIPPO ALONGI**

Direttore Unità Operativa Complessa  
Radioterapia Oncologica



## RADIOTHERAPY & PROSTATE CANCER: WHAT IS CHANGED IN CLINICAL PRACTICE?

EXPERT  
REVIEWS

2014

# From radiobiology to technology: what is changing in radiotherapy for prostate cancer

*Expert Rev. Anticancer Ther.* Early online, 1–12 (2014)

Berardino De Bari<sup>1</sup>,  
Alba Fiorentino\*<sup>2</sup>,  
Stefano Arcangeli<sup>3</sup>,  
Pierfrancesco Franco<sup>4</sup>,  
Rolando Maria  
D'Angelillo<sup>5</sup> and  
Filippo Alongi<sup>2</sup>

<sup>1</sup>Radiation Oncology Department,  
Centre Hospitalier Universitaire  
Vaudois – CHUV, Lausanne, Switzerland  
<sup>2</sup>Radiation Oncology Department, Sacro  
Cuore-Don Calabria Hospital, Via  
Sempredoni 5, 37024 Negrar-Verona,

In the last decades, new technologies have been introduced in the daily clinical practice of the radiation oncologist: 3D-Conformal radiotherapy (RT) became almost universally available, thereafter, intensity modulated RT (IMRT) gained large diffusion, due to its potential impact in improving the clinical outcomes, and more recently, helical and volumetric arc IMRT with image-guided RT are becoming more and more diffused and used for prostate cancer patients. The conventional dose-fractionation results to be the best compromise between the efficacy and the safety of the treatment, but combining new techniques, modern RT allows to overcome one of the major limits of the 'older' RT: the impossibility of delivering higher total doses and/or high dose/fraction. The evidences regarding radiobiology, clinical and technological evolution of RT in prostate cancer have been reported and discussed.

**KEYWORDS:** outcome • prostate cancer • radiobiology • radiotherapy • technique • technology

## *PROSTATE RT AS DEFINITIVE TREATMENT*

---

# ***PROSTATE RT VS PROSTATECTOMY: OUTCOMES INTERMEDIATE RISK***

---

## **ASSUMPTIONS:**

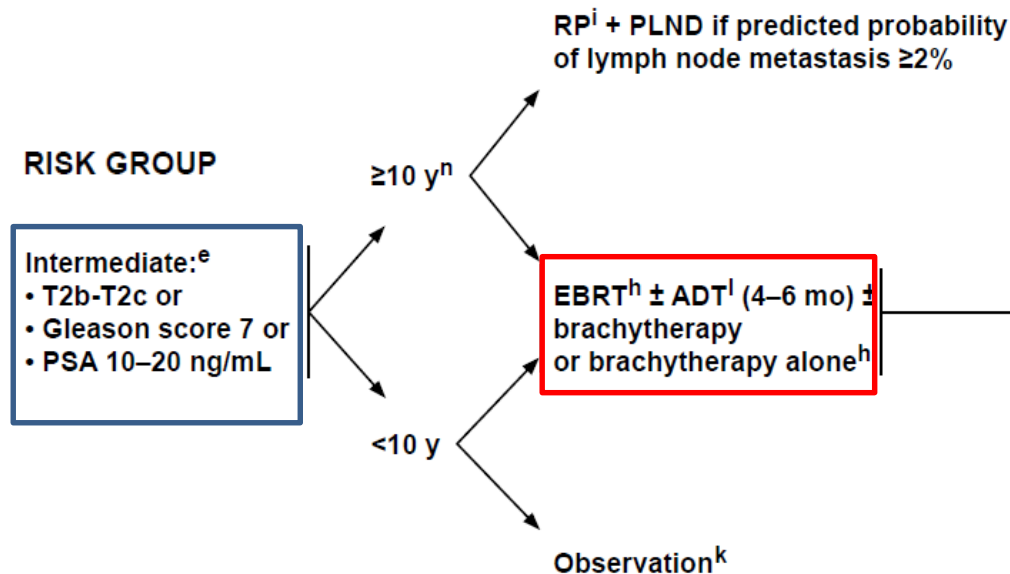
*Intermediate risk PC* remains a challenging clinical entity, and either prostatectomy or radiotherapy may be used.

# RADIOTERAPIA RADICALE RISCHIO INTERMEDIO



National  
Comprehensive  
Cancer  
Network®

## NCCN Guidelines Version 2.2016 Prostate Cancer Updates



# Trattamento RADICALE

## RISCHIO INTERMEDIO

### Randomized Primary RT + STAD Trials

Series	Risk	RT dose	Length of ADT	Result
RTOG 86-10	H	Standard	ST	ST + RT > RT
RTOG 96-01	H	Standard	ST	ST + RT > RT
Harvard	I/H	Standard	ST	ST + RT > RT
RTOG 94-08	L/I	Standard	ST	ST + RT > RT
Quebec	I/H	Standard	ST/IT	ST/IT + RT > RT
PMH	I/H	Standard	ST/IT	ST + RT = IT + RT
RTOG 99-10	I/H	Standard	ST/IT	ST + RT = IT + RT
TROG 03.04 (RADAR TRIAL)	I/H	Standard	ST/IT + Zolendronate	ST + RT = IT + RT

STAD: short term androgen deprivation (<0.5 year), IT : intermediate term (>0.5, <2 year).

# Trattamento RADICALE RISCHIO INTERMEDIO

© European Association of Urology 2016

## EAU - ESTRO - SIOG Guidelines on Prostate Cancer

In intermediate- risk PCa use a total dose of 76-78 Gy, in combination with short-term ADT (4-6 months).

1b

A

# PROSTATE RT VS PROSTATECTOMY: OUTCOMES HIGH RISK

© European Association of Urology 2016

## 6.2.4 *High-risk and locally advanced PCa*

There is no consensus regarding the optimal treatment of men with high-risk PCa.

The surgical treatment of clinical stage T3 PCa has traditionally been discouraged [339], mainly because patients have an increased risk of positive surgical margins and lymph node metastases and/or distant relapse

### ASSUMPTIONS:

According to the leading international guidelines:

- ✓ Radical RT +ADT could be the preferred treatment options for *high-risk PC*.
- ✓ RP is reserved for young and healthy patients with localized disease and high-risk features, if the tumor is not fixed to the adjacent structures.



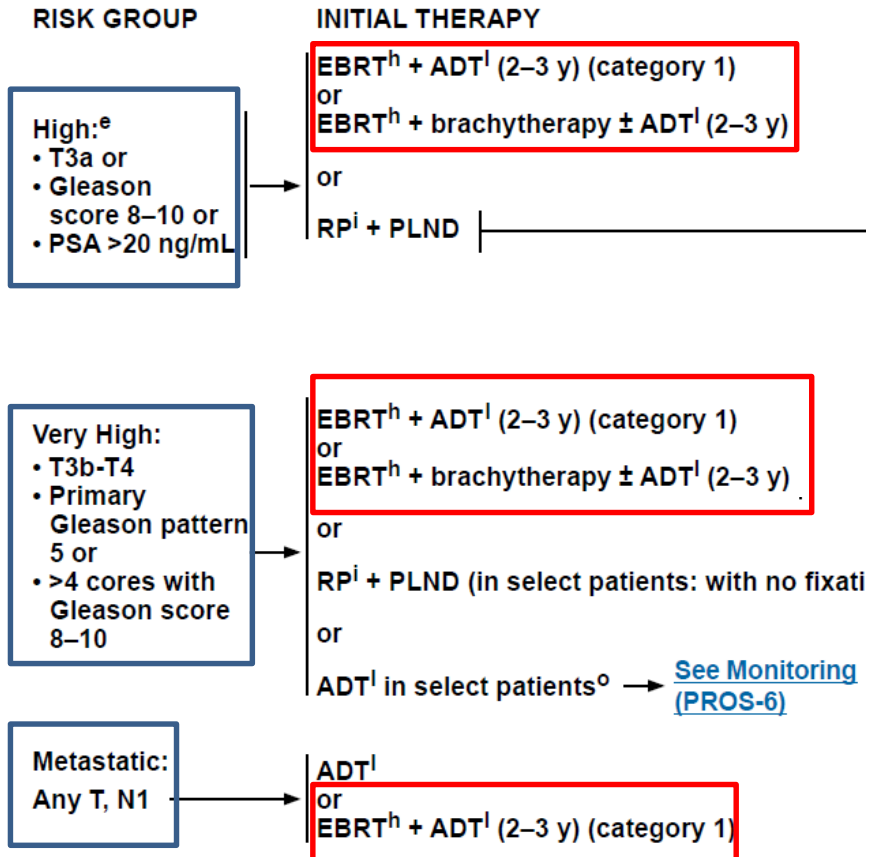
# RADIOTERAPIA RADICALE

## RISCHIO ALTO



National  
Comprehensive  
Cancer  
Network®

### NCCN Guidelines Version 2.2016 Prostate Cancer Updates



## Trattamento RADICALE

### **RISCHIO ALTO:** **ASSOCIAZIONE CON ORMONOTERAPIA**

#### Randomized Primary ADT ± RT

Series	Risk	RT dose	Length of ADT	Result
SPCG7	H	Standard	Permanent	<b>Permanent AD+RT &gt; Permanent AD</b>
NCIC CTG PR. 3	H	Standard	Permanent	<b>Permanent AD+RT &gt; Permanent AD</b>
French Trial	H	Standard	SLTAD	<b>LTAD + RT &gt; LTAD</b>

LTAD: long term androgen deprivation (>2-3 year)

#### RT + LONG VS SHORT TERM ADT

Series	Risk	RT dose	Result
<b>RTOG 9202</b>	H	Standard	<b>13% OS benefit in LTADT for GS score 8-10</b>
<b>EORTC 22961</b>	Very H	Standard	<b>3.8% OS benefit at 5 yrs in LTADT</b>

LTAD: long term androgen deprivation (>2-3 year)

# Trattamento RADICALE RISCHIO ALTO

© European Association of Urology 2016

## EAU - ESTRO - SIOG Guidelines on Prostate Cancer

In patients with high-risk localised PCa, use a total dose of 76-78 Gy in combination with long-term ADT (2-3 years).

1b

A

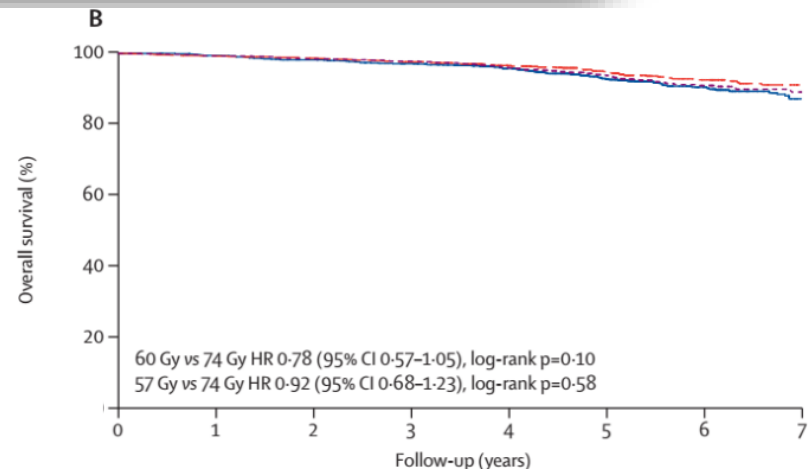
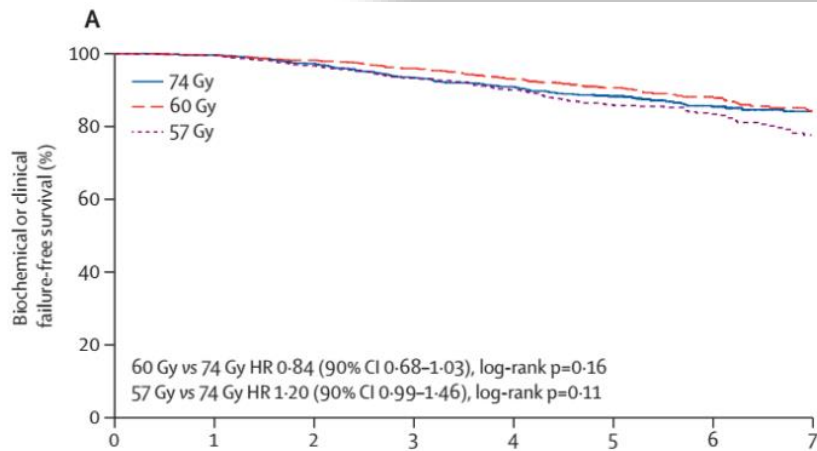
## MODERATE HYPOFRACTIONATION & PROSTATE CANCER

*Lancet Oncol 2016; 17: 1047-60*

### Conventional versus hypofractionated high-dose intensity-modulated radiotherapy for prostate cancer: 5-year outcomes of the randomised, non-inferiority, phase 3 CHHiP trial

*David Dearnaley, Isabel Syndikus, Helen Mossop, Vincent Khoo, Alison Birtle, David Bloomfield, John Graham, Peter Kirkbride, John Logue, Zafar Malik, Julian Money-Kyrle, Joe M O'Sullivan, Miguel Panades, Chris Parker, Helen Patterson\*, Christopher Scrase, John Staffurth, Andrew Stockdale, Jean Tremlett, Margaret Bidmead, Helen Mayles, Olivia Naismith, Chris South, Annie Gao, Clare Cruickshank, Shama Hassan, Julia Pugh, Clare Griffin, Emma Hall, on behalf of the CHHiP Investigators*

**NEW!!!!**



**Interpretation** Hypofractionated radiotherapy using 60 Gy in 20 fractions is non-inferior to conventional fractionation using 74 Gy in 37 fractions and is recommended as a new standard of care for external-beam radiotherapy of localised prostate cancer.

## SBRT : HOW WE TREAT PROSTATE CANCER?

**2016, IN PRESS**

### Extreme hypofractionation for early prostate cancer: biology meets technology

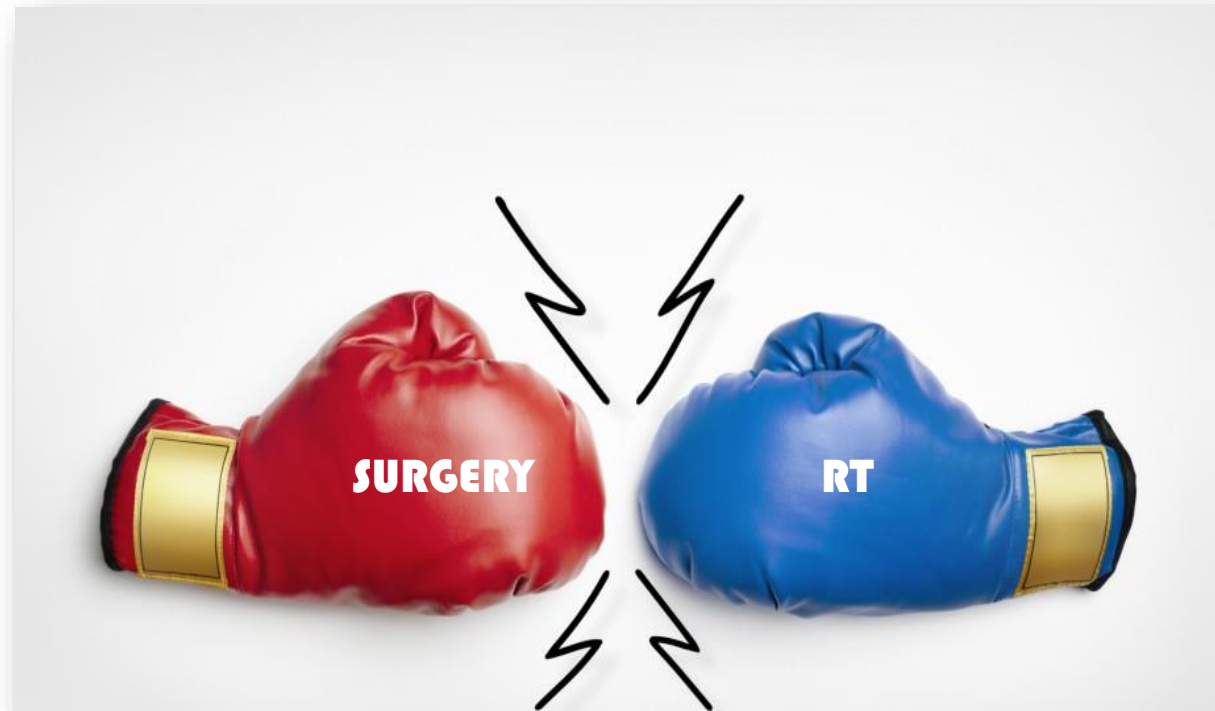
Berardino De Bari, M.D.; Stefano Arcangeli, M.D.; Delia Ciardo, M.Sc.; Rosario Mazzola, M.D.; Filippo Alongi, M.D.; Elvio G Russi, M.D.; Riccardo Santoni, M.D.; Stefano M Magrini, M.D.; Barbara A Jereczek-Fossa, M.D. Ph.D

*On the Behalf of Italian Association of Radiation Oncology (AIRO)*

- While awaiting long-term data on efficacy and toxicity, the analysed studies suggest that the **outcome profile** of this approach, alongside the patient convenience and reduced costs, **is promising**.
- Forty-eight ongoing clinical trials are also presented as a preview of the expectation from the near future.

## ***PROSTATE RT VS PROSTATECTOMY: NO EVIDENCES OF SUPERIORITY(OR INFERIORITY)??***

---



## ***PROSTATE RT VS PROSTATECTOMY:***

---

➤ OUTCOME

➤ SAFETY

➤ QUALITY OF LIFE

# PROSTATE RT VS PROSTATECTOMY: WHAT ABOUT RELATED TOXICITIES?

*Lancet Oncol* 2014; 15: 223-31

January 2014

## Incidence of complications other than urinary incontinence or erectile dysfunction after radical prostatectomy or radiotherapy for prostate cancer: a population-based cohort study

Robert K Nam, Patrick Cheung, Sender Herschorn, Refik Saskin, Jiandong Su, Laurence H Klotz, Michelle Chang, Girish S Kulkarni, Yuna Lee, Ronald T Kodama, Steven A Narod

**Background** Studies of complications resulting from surgery or radiotherapy for prostate cancer have mainly focused on incontinence and erectile dysfunction. We aimed to assess other important complications associated with these treatments for prostate cancer.

**Methods** We did a population-based retrospective cohort study, in which we used administrative hospital data, physician billing codes, and cancer registry data for men who underwent either surgery or radiotherapy alone for prostate cancer between 2002 and 2009 in Ontario, Canada. We measured the 5-year cumulative incidence of five treatment-related complication endpoints: hospital admissions; urological, rectal, or anal procedures; open surgical procedures; and secondary malignancies.

**Findings** In the 32 465 patients included in the study, the 5-year cumulative incidence of admission to hospital for a treatment-related complication was 22.2% (95% CI 21.7–22.7), but was 2.4% (2.2–2.6) for patients whose length of stay was longer than 1 day. The 5-year cumulative incidence of needing a urological procedure was 32.0% (95% CI 31.4–32.5), that of a rectal or anal procedure was 13.7% (13.3–14.1), and that of an open surgical procedure was 0.9% (0.8–1.1). The 5-year cumulative incidence of a second primary malignancy was 3.0% (2.6–3.5). These risks were significantly higher than were those of 32 465 matched controls with no history of prostate cancer. Older age and comorbidity at the time of index treatment were important predictors for a complication in all outcome categories, but the type of treatment received was the strongest predictor for complications. Patients who were given radiotherapy had higher incidence of complications for hospital admissions, rectal or anal procedures, open surgical procedures, and secondary malignancies at 5 years than did those who underwent surgery (adjusted hazard ratios 2.08–10.8,  $p < 0.0001$ ). However, the number of urological procedures was lower in the radiotherapy than in the surgery group (adjusted hazard ratio 0.66, 95% CI 0.63–0.69;  $p < 0.0001$ ).

**Interpretation** Complications after prostate cancer treatment are frequent and dependent on age, comorbidity, and the type of treatment. Patients and physicians should be aware of these risks when choosing treatment for prostate cancer, and should balance them with the clinical effectiveness of each therapy.

### Comments:

-32465 pts evaluated

-Patients submitted to RT had higher incidence of complications

-However, patients submitted to RT had lower incidence of urological procedures during hospitalization.

*Complication after RT and prostatectomy could be depend on age, comorbidities and treatment procedure*



# PROSTATE RT VS PROSTATECTOMY: WHAT ABOUT RELATED TOXICITIES?

Incidence of complications other than urinary incontinence or erectile dysfunction after radical prostatectomy or radiotherapy for prostate cancer: a population-based cohort study

*Robert K Nam, Patrick Cheung, Sender Herschorn, Refik Saskin, Jiandong Su, Laurence H Klotz, Michelle Chang, Girish S Kulkarni, Yuna Lee, Ronald T Kodama, Steven A Narod*

*Lancet Oncol 2014; 15: 223-31*

## Biases of the study

- This study has generated much discussion because of several selection bias:
  - retrospective comparisons
  - selection biases
  - patients given radiotherapy:
    - were older,
    - have more comorbidities,
    - have more advanced disease.
  - no differences between radiotherapy techniques (EBRT, BRT)
  - no clear definitions of toxicities

## ***PROSTATE RT VS PROSTATECTOMY:***

---

- OUTCOMES
- SAFETY
- **QUALITY OF LIFE**

# PROSTATE RT VS PROSTATECTOMY: QUALITY OF LIFE?

available at [www.sciencedirect.com](http://www.sciencedirect.com)  
journal homepage: [www.europeanurology.com](http://www.europeanurology.com)

August 2014



Platinum Priority – Prostate Cancer  
Editorial by XXX on pp. x–y of this issue

## Long-term Health-related Quality of Life After Primary Treatment for Localized Prostate Cancer: Results from the CaPSURE Registry

Sanoj Punnen<sup>a</sup>, Janet E. Cowan<sup>b</sup>, June M. Chan<sup>b</sup>, Peter R. Carroll<sup>b</sup>, Matthew R. Cooperberg<sup>b,\*</sup>

<sup>a</sup>Department of Urology, Miller School of Medicine, University of Miami, Miami, FL, USA; <sup>b</sup>University of California, San Francisco, Helen Diller Family

**Background:** Few studies have reported on late declines and long-term health-related quality of life (HRQOL) after prostate cancer (PCa) treatment.

**Objective:** We assessed long-term HRQOL following various treatments for localized PCa.

**Design, setting, and participants:** This cohort study of HRQOL up to 10 yr after treatment used a prospectively accrued, nationwide PCa registry that collects longitudinal patient-reported HRQOL.

**Intervention:** Various primary treatments for localized PCa.

**Outcome measurements and statistical analysis:** The Medical Outcomes Studies 36-item Short Form and the University of California, Los Angeles, Prostate Cancer Index characterized physical function, mental health, and sexual, urinary, and bowel function and bother. Repeated measures mixed-model analysis assessed change in HRQOL by treatment over time, and logistic regression was used to measure the likelihood of a clinically significant decline in HRQOL.

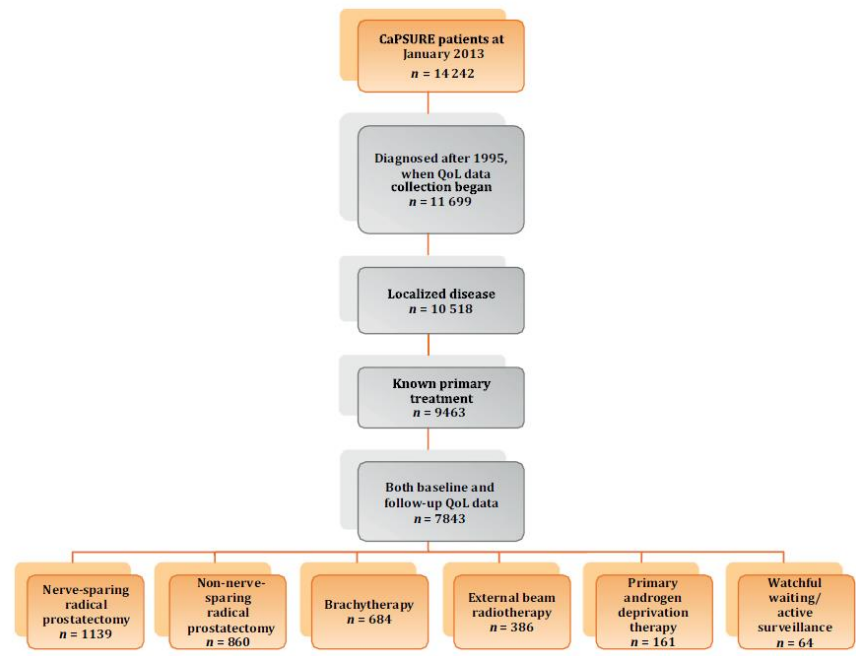
**Results and limitations:** Among 3294 men, 1139 (34%) underwent nerve-sparing radical prostatectomy (NSRP), 860 (26%) underwent non-NSRP, 684 (21%) underwent brachytherapy, 386 (12%) underwent external beam radiotherapy, 161 (5%) underwent primary androgen deprivation therapy, and 64 (2%) pursued watchful waiting/active surveillance. Median follow-up was 74 mo (interquartile range: 50–102). Most treatments resulted in early declines in HRQOL, with some recovery over the next 1–2 yr and a plateau in scores thereafter. Surgery had the largest impact on sexual function and bother and on urinary function, radiation had the strongest effect on bowel function, and androgen deprivation therapy had the strongest effect on physical function. The main limitation was attrition among the cohort.

**Conclusions:** Although most men experience initial declines in HRQOL in the first 2 yr after treatment, there is little change from 3 to 10 yr and most differences between treatments attenuated over time.

**Patient summary:** Various treatments for prostate cancer result in a distinct constellation of adverse effects on health-related quality of life, which may have a long-term impact. These findings are helpful regarding shared decision making over choice of primary treatment.

### Comments:

- Randomized trial 3994 pts:



**SURGERY AFFECTS MORE SEXUAL AND GU  
RT AFFECTS MORE INTESTINE  
AGE IS CRUCIAL**

## ***PROSTATE RT VS PROSTATECTOMY:***

---

➤ **OUTCOMES**

➤ SAFETY

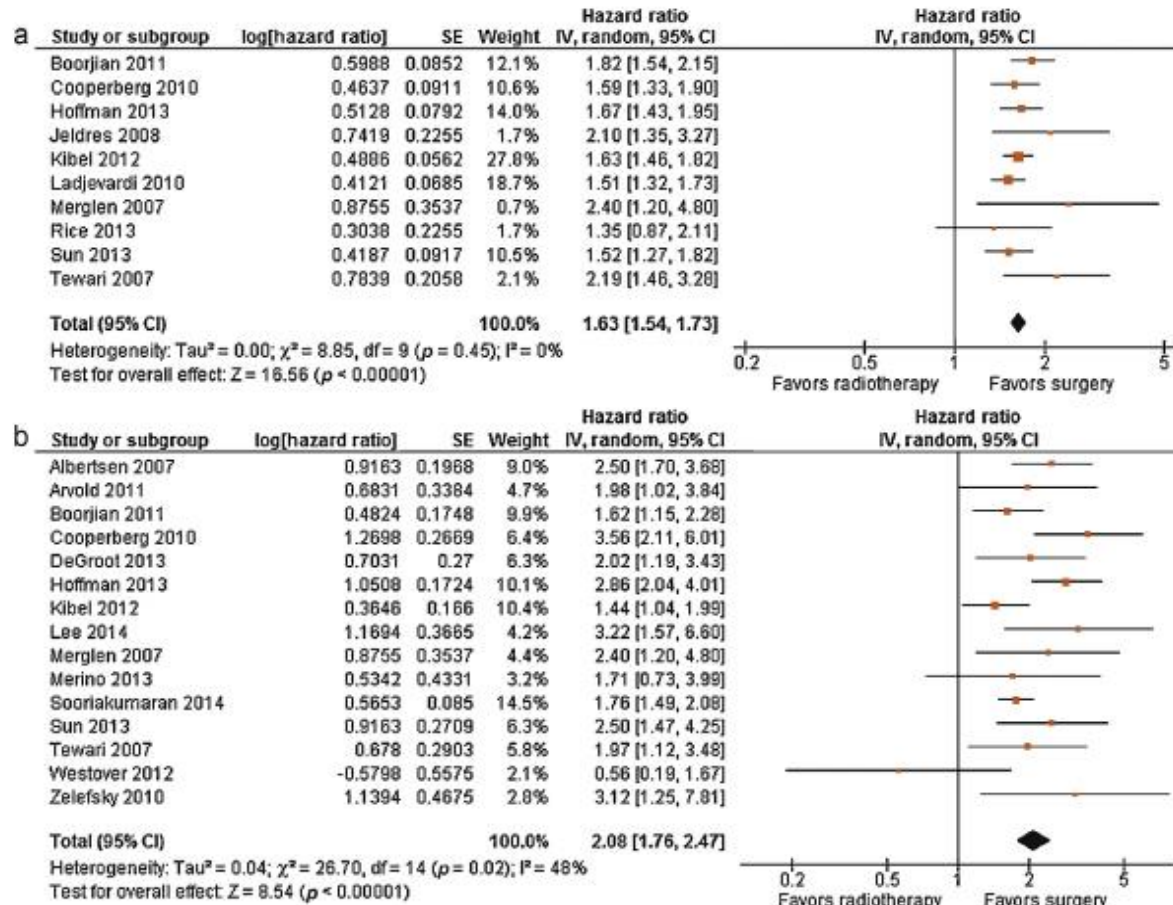
➤ QUALITY OF LIFE

# PROSTATE RT VS PROSTATECTOMY:

EUROPEAN UROLOGY 70 (2016) 21-30

## Surgery Versus Radiotherapy for Clinically-localized Prostate Cancer: A Systematic Review and Meta-analysis

Christopher J.D. Wallis<sup>a,b,c</sup>, Refik Saskin<sup>c,d</sup>, Richard Choo<sup>e</sup>, Sender Herschorn<sup>a,b</sup>,  
Ronald T. Kodama<sup>a,b</sup>, Raj Satkunasivam<sup>a,b</sup>, Prakesh S. Shah<sup>c,f,g</sup>, Cyril Danjoux<sup>h</sup>,  
Robert K. Nam<sup>a,b,c,\*</sup>



## Radiation Therapy Versus Radical Prostatectomy: A Never-ending Discussion

*Martin Spahn<sup>a,\*</sup>, Alan Dal Pra<sup>b</sup>, Daniel Aebersold<sup>b</sup>, Bertrand Tombal<sup>c</sup>*

A number of population-based studies have concluded that survival rates are better after radical prostatectomy (RP) than after radiation therapy (RT). The article published by Wallis et al in this issue of European Urology used several of these reports in a meta-analysis.

Such analyses can make things worse because: (1) they try to answer a question that can be answered only by a well-conducted randomized clinical trial; and (2) they attempt to recommend a “one treatment fits all” approach for patients with localized PC.

# PROSTATE RT VS PROSTATECTOMY: PROTECT TRIAL



The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

## 10-Year Outcomes after Monitoring, Surgery, or Radiotherapy for Localized Prostate Cancer

F.C. Hamdy, J.L. Donovan, J.A. Lane, M. Mason, C. Metcalfe, P. Holding, M. Davis, T.J. Peters, E.L. Turner, R.M. Martin, J. Oxley, M. Robinson, J. Staffurth, E. Walsh, P. Bollina, J. Catto, A. Doble, A. Doherty, D. Gillatt, R. Kockelbergh, H. Kynaston, A. Paul, P. Powell, S. Prescott, D.J. Rosario, E. Rowe, and D.E. Neal, for the ProtecT Study Group\*

1643 agreed to undergo randomization to active monitoring (545 men), surgery (553), or radiotherapy (545).

### CONCLUSIONS

At a median of 10 years, prostate-cancer-specific mortality was low irrespective of the treatment assigned, with no significant difference among treatments. Surgery and radiotherapy were associated with lower incidences of disease progression and metastases than was active monitoring. (Funded by the National Institute for Health Research; Current Controlled Trials number, ISRCTN20141297; ClinicalTrials.gov number, NCT02044172.)

## ***POST-OPERATIVE RT AS ADJUVANT OR SALVAGE APPROACH***

---



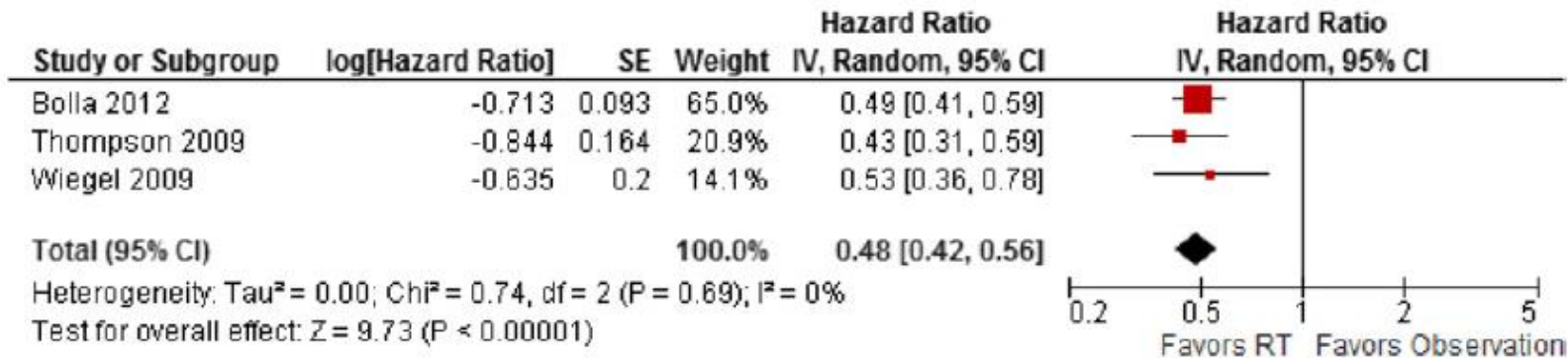
## POST PROSTATECTOMY SETTING: ADJUVANT RT OR WAIT AND SEE??

### EAU - ESTRO - SIOG Guidelines on Prostate Cancer

© European Association of Urology 2016

Summary of evidence	LE	
The highest effect of adjuvant radiotherapy is seen in patients with pT3R1 PCa.	1a	
Recommendation	LE	GR
Discuss AS and surgery with all patients who would be suitable for these treatment options.	4	A
Offer EBRT to all risk groups of non-metastatic PCa.	2a	A
In low-risk PCa, use a total dose of 74 to 78 Gy.	1a	A
In patients with low-risk PCa, without a previous TURP and with a good IPSS and a prostate volume < 50 mL, offer LDR brachytherapy.	2a	A
In intermediate- risk PCa use a total dose of 76-78 Gy, in combination with short-term ADT (4-6 months).	1b	A
In patients with high-risk localised PCa, use a total dose of 76-78 Gy in combination with long-term ADT (2-3 years).	1b	A
In patients with locally advanced cN0 PCa, offer radiotherapy in combination with long-term ADT (2-3 years).	1a	A
Offer IMRT for definitive treatment of PCa by EBRT.	2a	A
In patients with cN+ PCa offer pelvic external irradiation in combination with immediate long-term ADT.	2b	B
In patients with pT3,N0M0 PCa and an undetectable PSA following RP, discuss adjuvant EBRT because it improves at least biochemical-free survival.	1a	A
Inform patients with pT3,N0M0 PCa and an undetectable PSA following RP about salvage irradiation as an alternative to adjuvant irradiation when PSA increases (see Section 6.10.5.1).	2b	A

## POST PROSTATECTOMY SETTING: EVIDENCES AND CONCERNS OF ADJUVANT RT



Meta-analysis of **biochemical recurrence** data from SWOG 8794,<sup>26</sup> EORTC 22911<sup>25</sup> and ARO 96-02<sup>15</sup>

**Table 1.** Acute toxicity effects of radiotherapy after prostatectomy

Study arm type	% Genitourinary		% Gastrointestinal	
	Grade 1-2	Grade 3-4	Grade 1-2	Grade 3-4
Adjuvant	10.5-26	2.0-8.0	22.0-25.0	0.0-2.0

**Table 2.** Late toxicity effects of radiotherapy after prostatectomy

Study arm type	% Genitourinary		% Gastrointestinal	
	Grade 1-2	Grade 3-4	Grade 1-2	Grade 3-4
Adjuvant	2.0-22.0	0.0-10.6	1.0-12.7	0.0-6.7

## POST PROSTATECTOMY SETTING: ADJUVANT RT OR WAIT AND SEE??

Critical Reviews in Oncology/Hematology xxx (2015)

### A cast of shadow on adjuvant radiotherapy for prostate cancer: A critical review based on a methodological perspective

Stefano Arcangeli<sup>a,\*</sup>, Sara Ramella<sup>b</sup>, Berardino De Bari<sup>c</sup>, Pierfrancesco Franco<sup>d</sup>, Filippo Alongi<sup>e</sup>, Rolando M. D'Angelillo<sup>b</sup>

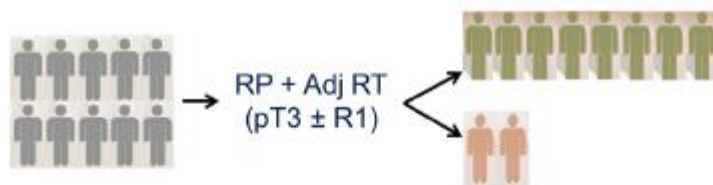


Fig. 2. Number needed to treat with adjuvant RT (ART).

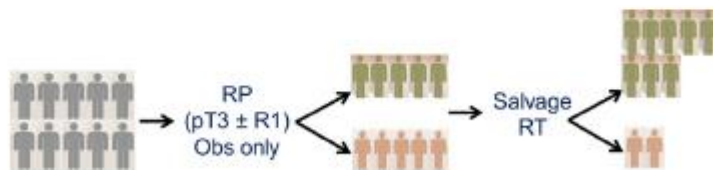


Fig. 3. Number needed to treat with salvage RT (SRT).

Perspectives Adjuvant RT has a high level of evidence (IB) thanks to three randomized trials with at least 10-year follow-up, all recording a benefit in terms of biochemical PFS, but its applicability in present daily clinics should be remodulated.

## POST PROSTATECTOMY SETTING: ADJUVANT RT OR WAIT AND SEE??



**Re: Patrick C. Walsh, Nathan Lawrentschuk. Immediate Adjuvant Radiation Therapy Following Radical Prostatectomy Should Not Be Advised for Men with Extraprostatic Extension Who Have Negative Surgical Margins. Eur Urol 2016;69:191-2**

***Personalization of Immediate Adjuvant Radiation Therapy in Prostate Cancer Does Not Mean Omission***

Filippo Alongi  
Rosario Mazzola\*  
Sergio Fersino

*Division of Radiation Oncology, Sacro Cuore Don Calabria Cancer Care Center, Negrar-Verona, Italy*

In the era of personalized medicine, we believe that further trials are strongly warranted to identify patients with high-risk prostate cancer who would really benefit from adjuvant RT [5]. In some cases, urologists remain reluctant to propose immediate adjuvant RT after RP for fear of exacerbating treatment-related side effects, and thus any evaluation of surgical performance. This may be understandable from the point of view of the urologist, but less so from that of the patient. Undoubtedly, risks and benefits should be discussed with patients in a multidisciplinary context taking into account the available evidence derived from three large randomized trials (evidence level IA) mentioned by the authors themselves [1] rather than opinions derived from personal experiences, albeit authoritative.

## POST PROSTATECTOMY SETTING: ADJUVANT RT OR WAIT AND SEE??

JOURNAL OF CLINICAL ONCOLOGY

ASCO SPECIAL ARTICLE

November 2014

### Adjuvant and Salvage Radiotherapy After Prostatectomy: American Society of Clinical Oncology Clinical Practice Guideline Endorsement

Stephen J. Freedland, R. Bryan Rumble, Antonio Finelli, Ronald C. Chen, Susan Slovin, Mark N. Stein,  
David S. Mendelson, Colin Wackett, and Howard M. Sandler

#### A B S T R A C T

##### **Purpose**

To endorse the American Urological Association (AUA)/American Society for Radiation Oncology (ASTRO) guideline on adjuvant and salvage radiotherapy after prostatectomy. The American Society of Clinical Oncology (ASCO) has a policy and set of procedures for endorsing clinical practice guidelines developed by other professional organizations.

##### **Methods**

The guideline on adjuvant and salvage radiotherapy after prostatectomy was reviewed for developmental rigor by methodologists. An ASCO endorsement panel then reviewed the content and recommendations.

##### **Results**

The panel determined that the guideline recommendations on adjuvant and salvage radiotherapy after prostatectomy, published in August 2013, are clear, thorough, and based on the most relevant scientific evidence. ASCO endorsed the guideline on adjuvant and salvage radiotherapy after prostatectomy, adding one qualifying statement that not all candidates for adjuvant or salvage radiotherapy have the same risk of recurrence or disease progression, and thus, risk-benefit ratios are not the same for all men. Those at the highest risk for recurrence after radical prostatectomy include men with seminal vesicle invasion, Gleason score 8 to 10, extensive positive margins, and detectable postoperative prostate-specific antigen (PSA).

##### **Recommendations**

Physicians should discuss adjuvant radiotherapy with patients with adverse pathologic findings at prostatectomy (ie, seminal vesicle invasion, positive surgical margins, extraprostatic extension) and salvage radiotherapy with patients with PSA or local recurrence after prostatectomy. The discussion of radiotherapy should include possible short- and long-term adverse effects and potential benefits. The decision to administer radiotherapy should be made by the patient and multidisciplinary treatment team, keeping in mind that not all men are at equal risk of recurrence or clinically meaningful disease progression. Thus, the risk-benefit ratio will differ for each patient.

#### Comments:

-Endorsement of AUA/ASTRO GUIDELINES

-adding one qualifying statement:

not all candidates for adjuvant or salvage RT have the same risk of recurrence or disease progression, and thus, risk-benefit ratios are not the same for all men.

-highest risk for recurrence after radical prostatectomy include men with seminal vesicle invasion, Gleason score 8 to 10, extensive positive margins, and detectable postoperative PSA.

-The decision to administer radiotherapy should be made by the patient and multidisciplinary treatment team, keeping in mind that not all men are at equal risk of recurrence or clinically meaningful disease progression.

**PERSONALIZED  
APPROACH BASED ON  
RISK FACTORS**

# POST PROSTATECTOMY SETTING: EARLY SALVAGE RT?

EUROPEAN UROLOGY 68 (2015) 775–776

## Postprostatectomy Radiotherapy for Patients with High-risk Features on Definitive Pathology: A Plea for Evidence-based Medicine

Alberto Bossi<sup>a,\*</sup>, Thomas Wiegel<sup>b</sup>, Mack Roach<sup>c</sup>

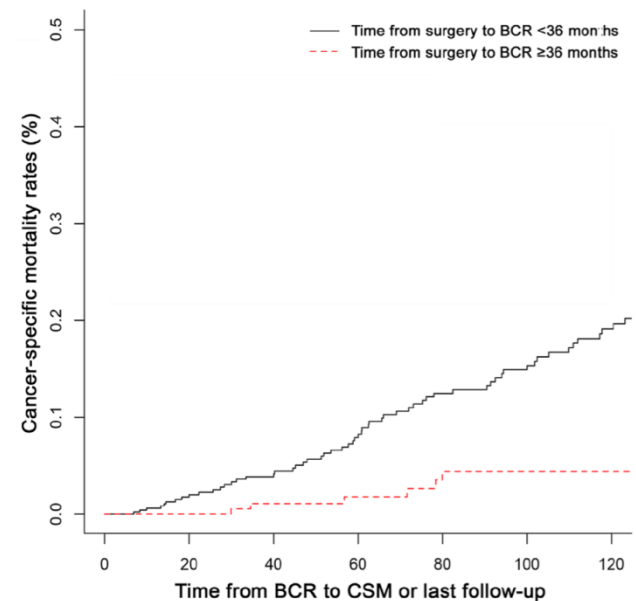
It is noteworthy that multivariate analysis clearly demonstrated a significant association between (early) biochemical recurrence and the risk of dying from PCa

Urologic Oncology: Seminars and Original Investigations 33 (2015) 163.e7–163.e13

Natural history of surgically treated high-risk prostate cancer

Alberto Briganti, M.D.<sup>a,\*1</sup>, Robert Jeffrey Karnes, M.D.<sup>b,1</sup>, Giorgio Gandaglia, M.D.<sup>a</sup>, Martin Spahn, M.D.<sup>c</sup>, Paolo Gontero, M.D.<sup>d</sup>, Lorenzo Tosco, M.D.<sup>e</sup>, Burkhard Kneitz, M.D.<sup>f</sup>, Felix K.H. Chun, M.D.<sup>g</sup>, Emanuele Zaffuto, M.D.<sup>a</sup>, Maxine Sun, M.D.<sup>h</sup>, Markus Graefen, M.D.<sup>i</sup>, Giansilvio Marchioro, M.D.<sup>j</sup>, Detlef Frohneberg, M.D.<sup>k</sup>, Simone Giona, M.D.<sup>d</sup>, Pierre I. Karakiewicz, M.D.<sup>h</sup>, Hein Van Poppel, M.D.<sup>e</sup>, Francesco Montorsi, M.D.<sup>a</sup>, Steven Joniau, M.D.<sup>e</sup>, on behalf of the European Multicenter Prostate Cancer Clinical and Translational Research Group (EMPaCT)

Individuals who experienced BCR within 3 years from surgery had significantly higher CSM rates compared with those who developed late BCR. At competing-risks regression analyses, a longer time to BCR was associated with lower risk of CSM, after accounting for the risk of OCM.



## The right treatment for the right patient:



- ✓ Ogni paziente deve essere valutato nella sua interezza considerando oltre alle caratteristiche tumorali, l'aspettativa di vita, la sua realtà e i suoi desideri .
- ✓ Occorre fornire le informazioni necessarie affinché possa scegliere tra le diverse possibilità terapeutiche.
- ✓ Allo stato attuale non esiste una terapia migliore di un'altra ma forse una più adatta caso per caso.