



Ospedale
Sacro Cuore - Don Calabria
Negrar (Verona)

IL RUOLO DELLA CHIRURGIA ROBOTICA NEL Ca PROSTATICO

Dott. Stefano Cavalleri

Negrar – 1 Aprile 2015

BACK TO THE FUTURE...

May 23th 2000



BJU International (2001), 87, 408–410

POINT OF TECHNIQUE

Robotically-assisted laparoscopic radical prostatectomy

J. BINDER and W. KRAMER

Department of Urology and Paediatric Urology, University Hospital, Johann-Wolfgang-Goethe University, Frankfurt am Main, Germany

◆ COMMUNICATION RAPIDE

Progrès en Urologie (2000), 10, 520-523

Prostatectomie radicale laparoscopique réalisée à distance par robot. A propos d'un cas

Clément-Claude ABBOU, Andràs HOZNEK, Laurent SALOMON, Adrian LOBONTIU,
Fabien SAINT, Antony CICCIO, Patrick ANTIPHON, Dominique CHOPIN

Service d'Urologie, Hôpital Henri Mondor, Créteil, France

DaVinci® Xi™



CONSOLE



**PATIENT-SIDE
CART**



VISION CART

SISTEMA DaVinci®

Sistema ON-line (master-slave)

Riproduce in tempo reale nel campo operatorio i movimenti compiuti alla consolle dal chirurgo

Strumenti a 7 gradi di libertà



INDICAZIONI

	Low-risk	Intermediate-risk	High-risk	
Definition	PSA < 10 ng / mL and GS < 7 and cT1-2a	PSA 10-20 ng /mL or GS 7 or cT2b	PSA > 20 ng / mL or GS > 7 or cT2c	any PSA any GS cT3-4 or cN+
	Localised			Locally advanced



European
Association
of Urology

... WHY NOT?



- Pregressa chirurgia addominale maggiore



- BMI elevati

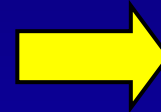


- Patologie polmonari e/o cardiologiche
(Trendelembourg $>30^\circ$)



VANTAGGI DELLA CHIRURGIA ROBOTICA

- Minor invasività → recupero precoce nel post-op
- Minori perdite ematiche intra-operatorie
- Visione magnificata (10-12x)
- Accuratezza dei movimenti
- Annullamento del tremore
- Minor stress fisico del chirurgo



Migliori outcomes
oncologici e
funzionali

Table 6.2.2: Intra-and peri-operative complications of retropubic RP and RALP (Adapted from [312])

Predicted probability of event	RALP	Laparoscopic RP	RRP
Bladder neck contracture	0.010	0.021	0.049
Anastomotic leak	0.010	0.044	0.033
Infection	0.008	0.011	0.048
Organ injury	0.004	0.029	0.008
Ileus	0.011	0.024	0.009
Deep-vein thrombosis	0.006	0.002	0.014
Predicted rates of event	RALP (%)	Laparoscopic RP (%)	RRP (%)
Clavien I	2.1	4.1	4.2
Clavien II	3.9	7.2	17.5
Clavien IIIa	0.5	2.3	1.8
Clavien IIIb	0.9	3.6	2.5
Clavien IVa	0.6	0.8	2.1
Clavien V	< 0.1	0.2	0.2

RALP = robot-assisted laparoscopic prostatectomy; RP = radical prostatectomy; RRP = radical retropubic prostatectomy.

SVANTAGGI DELLA CHIRURGIA ROBOTICA

- Maggior durata dell'intervento (30-60')
- Costi superiori rispetto a chirurgia open o laparoscopica

MA

- Minor degenza → recupero costi
- Minori comorbidità post-op → precoce ritorno al lavoro
→ minor spesa sanitaria in presidi
(pannolini)

Predicting an Optimal Outcome after Radical Prostatectomy: The “Trifecta” Nomogram

James A. Eastham, MD¹, Peter T. Scardino, MD¹, and Michael W. Kattan, PhD²

¹Division of Urology, Memorial Sloan Kettering Cancer Center

²Department of Quantitative Health Sciences, Cleveland Clinic

- 2000-2006: 1577 patients; 2 surgeons; open technique
- Continent + potent + PSA<50ng/ml
- Freedom from biochemical recurrence (PSA<0,2 ng/ml)
- Continence (no pads)
- Potency (intercourse, with or without PDE5-inh)
- 60-70% of patients can achieve trifecta outcomes

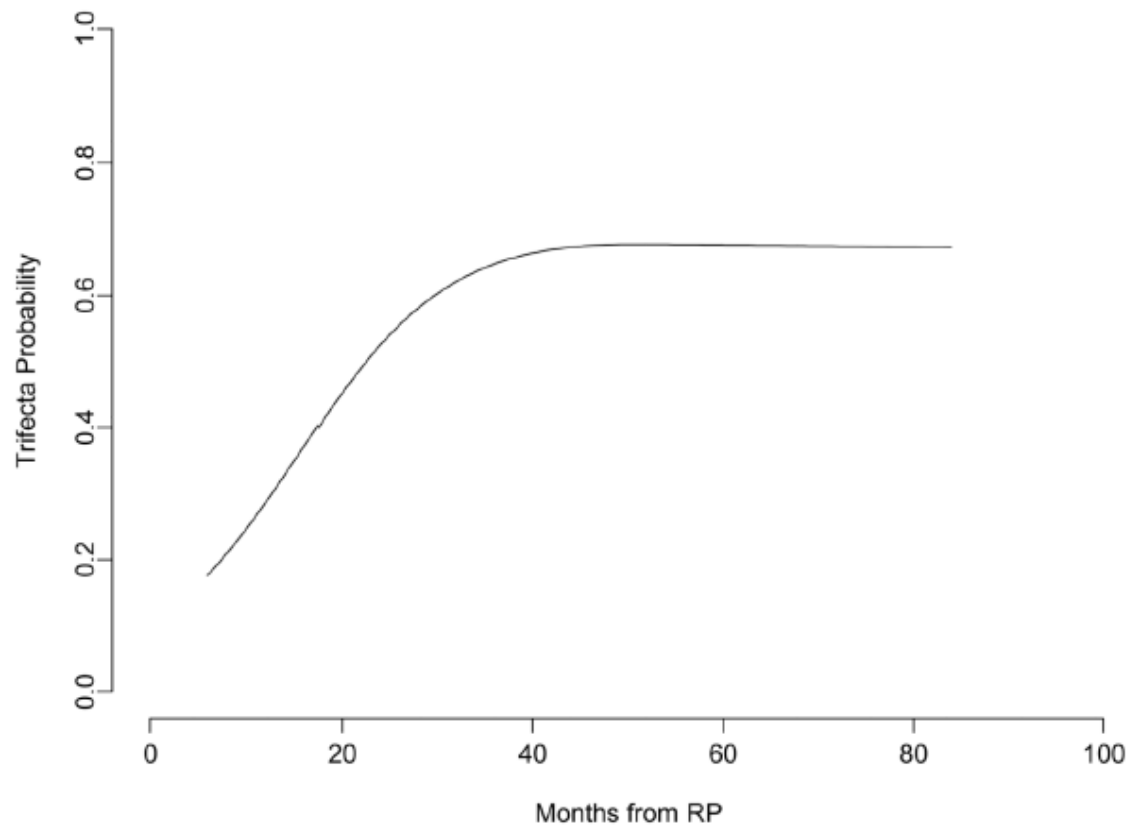


Figure 3.

Trifecta probability for an individual patient after radical prostatectomy (RP). This is the probability of reaching and maintaining trifecta for a patient with average characteristics in our series: pre-RP PSA of 5.4, clinical stage T1c, normal pretreatment erectile function (rigidity scale 1), prostate biopsy Gleason grade 3+3, and pre-RP age of 58.2 years

Pentafecta: A New Concept for Reporting Outcomes of Robot-Assisted Laparoscopic Radical Prostatectomy

Vipul R. Patel^{a,}, Ananthakrishnan Sivaraman^a, Rafael F. Coelho^{a,b,c}, Sanket Chauhan^a, Kenneth J. Palmer^a, Marcelo A. Orvieto^a, Ignacio Camacho^a, Geoff Coughlin^a, Bernardo Rocco^{a,d}*

^a Global Robotics Institute, Florida Hospital Celebration Health, University of Central Florida School of Medicine, Orlando, FL, USA

^b Hospital Israelita Albert Einstein, Sao Paulo, Brazil

^c State of Sao Paulo Cancer Institute, University of Sao Paulo School of Medicine, Sao Paulo, Brazil

^d Istituto di Urologia – Università degli studi di Milano, Ospedale Policlinico-Fondazione Ca'Granda, Milan, Italy

- 2008-2009: 1111 patients; 1 surgeon; RARP
- Continent + potent + full nerve-sparing → 332 patients
- Freedom from biochemical recurrence (PSA < 0,2 ng/ml)
- Continence (no pads)
- Potency (intercourse > 50% of attempts, ± PDE5-inh)
- No post-op complications
- Negative surgical margins

TRIFECTA vs PENTAFECTA

Table 3 – Variables comprising the pentafecta success rates

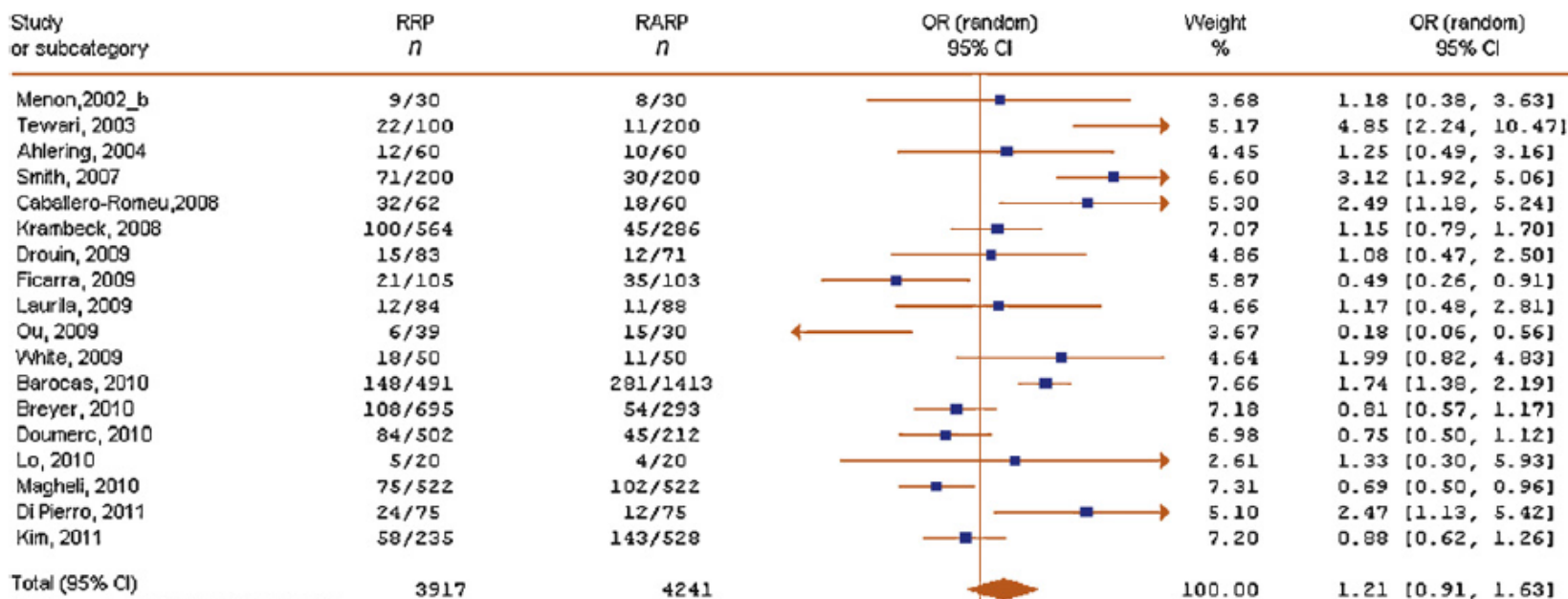
Variable	Proportion of patients	%
Complication	310/332	93.4
PSM	301/332	90.7
Potency	298/332	89.8
Continence	320/332	96.4
BCR-free rate	320/332	96.4
Trifecta	276/332	83.1
Failure to achieve trifecta	56/332	16.9
Pentafecta	235/332	70.8
Failure to achieve pentafecta	97/235	29.2

PSM = positive surgical margin; BCR = biochemical recurrence.

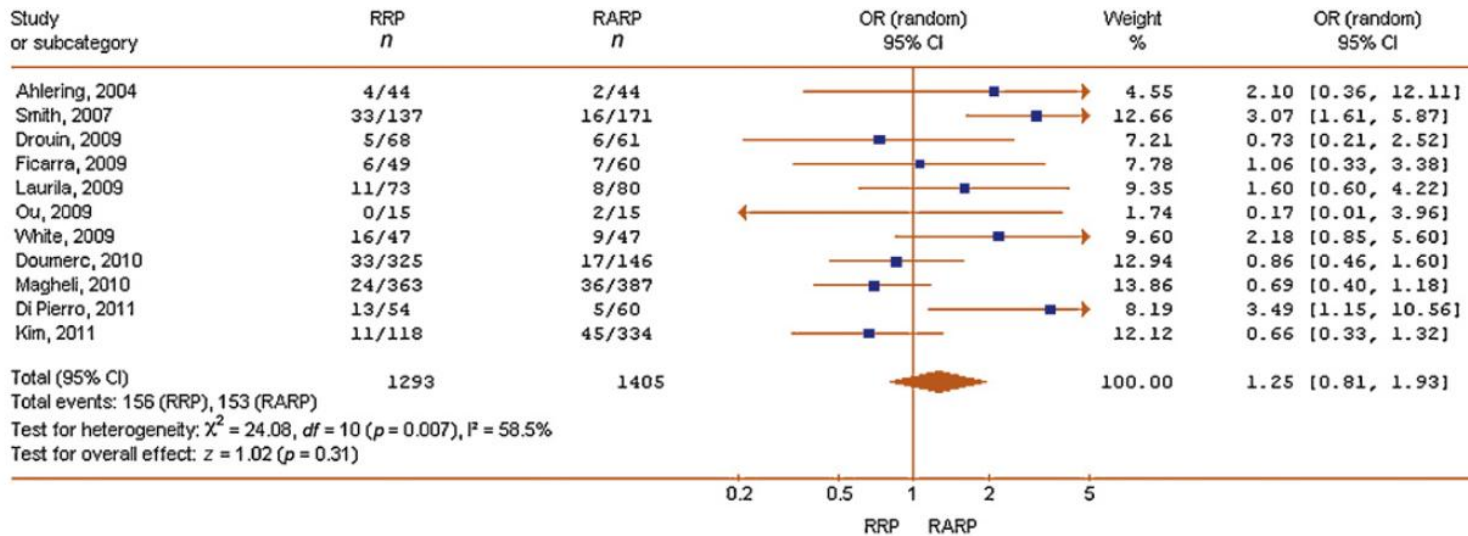
Systematic Review and Meta-analysis of Studies Reporting Oncologic Outcome After Robot-assisted Radical Prostatectomy

Giacomo Novara^{a,*}, Vincenzo Ficarra^{a,b}, Simone Mocellin^a, Thomas E. Ahlering^c, Peter R. Carroll^d, Markus Graefen^e, Giorgio Guazzoni^f, Mani Menon^g, Vipul R. Patel^h, Shahrokh F. Shariatⁱ, Ashutosh K. Tewariⁱ, Hendrik Van Poppel^j, Filiberto Zattoni^a, Francesco Montorsi^k, Alexandre Mottrie^b, Raymond C. Rosen^l, Timothy G. Wilson^m

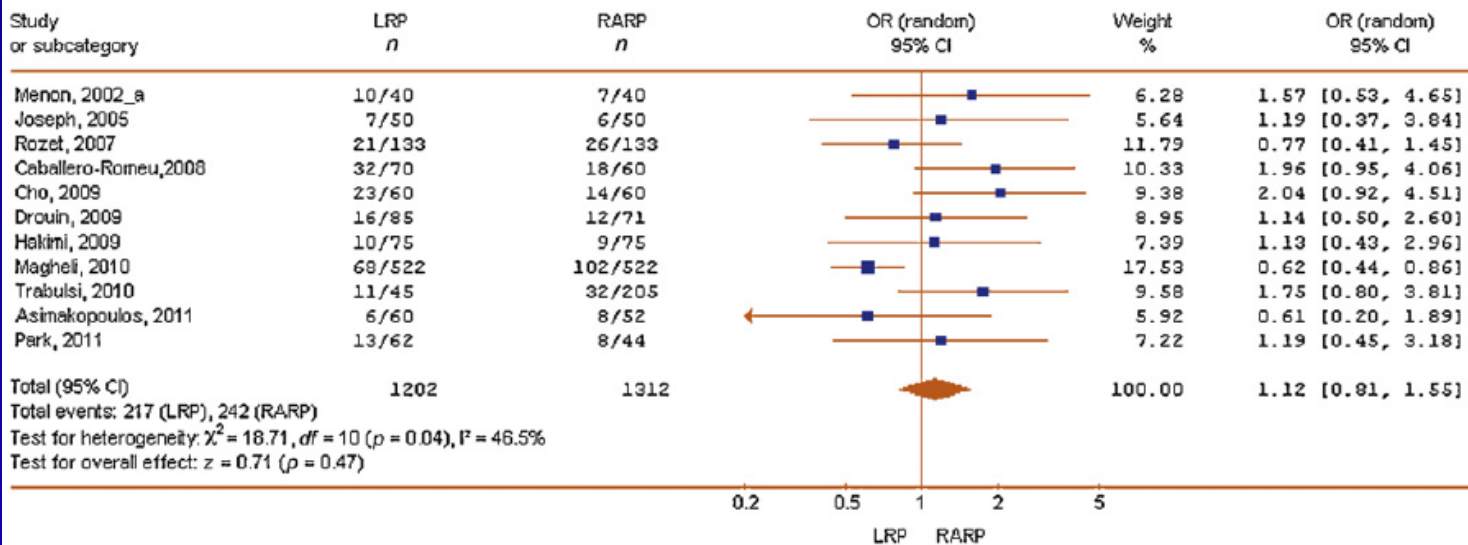
Review: Radical prostatectomy: comparisons of different approaches
 Comparison: 07 Positive surgical margin rate
 Outcome: 03 Positive surgical margin rate: RRP vs. RARP



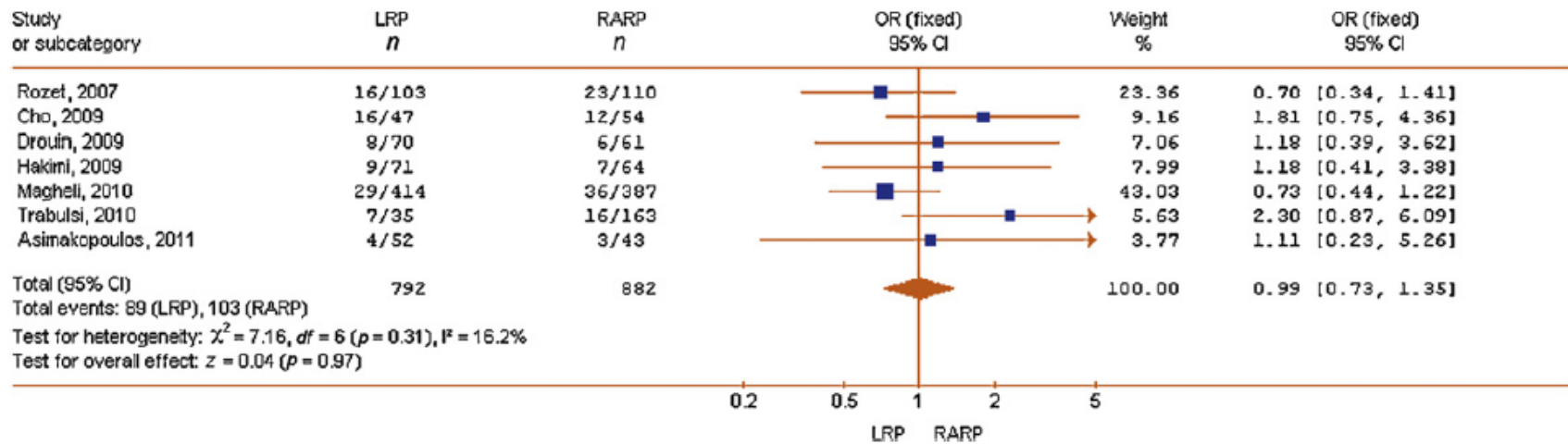
Review: Radical prostatectomy: comparisons of different approaches
 Comparison: 07 Positive surgical margin rate
 Outcome: 08 Positive surgical margin rate in pT2 cancer: RRP vs. RARP



Review: Radical prostatectomy: comparisons of different approaches
 Comparison: 07 Positive surgical margin rate
 Outcome: 05 Positive surgical margin rate: LRP vs. RARP



Review: Radical prostatectomy: comparisons of different approaches
 Comparison: 07 Positive surgical margin rate
 Outcome: 10 Positive surgical margin rate in pT2 cancer: LRP vs. RARP

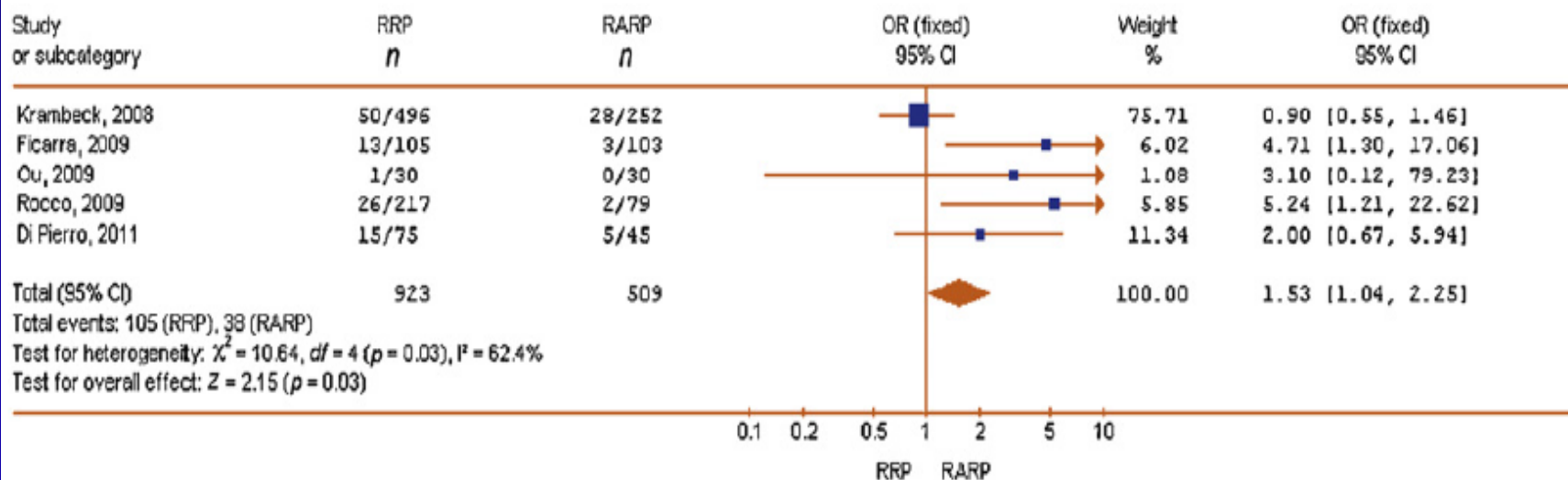


- Positive surgical margins rate are similar between RARP, LRP and RRP
- Definitive comparison are not currently possible

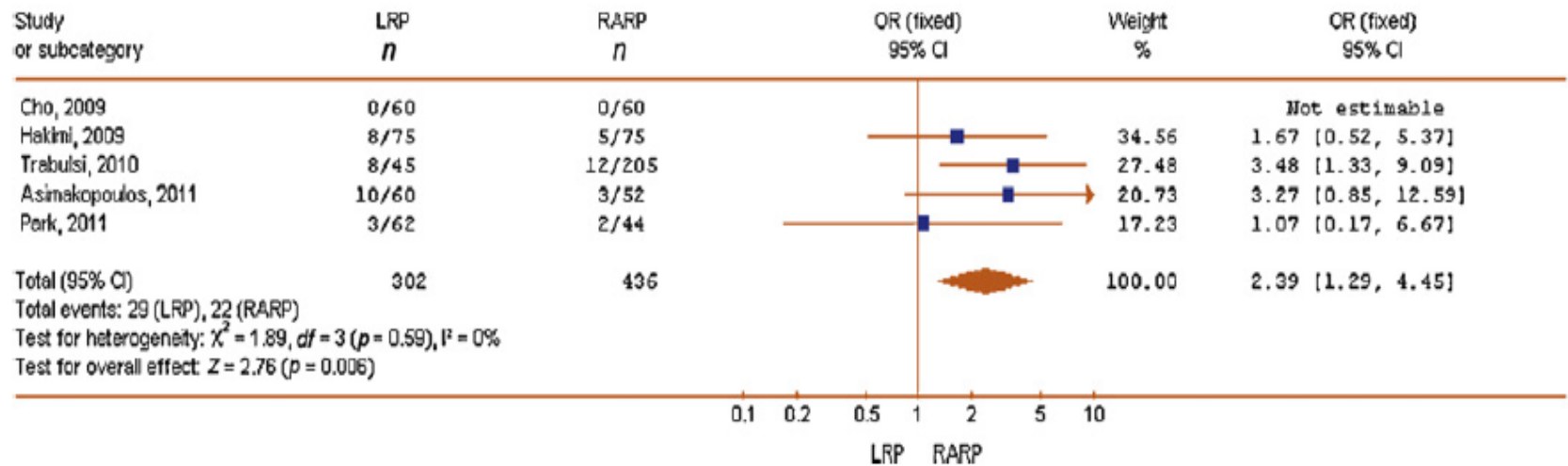
Systematic Review and Meta-analysis of Studies Reporting Urinary Continence Recovery After Robot-assisted Radical Prostatectomy

Vincenzo Ficarra^{a,b,*}, Giacomo Novara^a, Raymond C. Rosen^c, Walter Artibani^d, Peter R. Carroll^e, Anthony Costello^f, Mani Menon^g, Francesco Montorsi^h, Vipul R. Patelⁱ, Jens-Uwe Stolzenburg^j, Henk Van der Poel^k, Timothy G. Wilson^l, Filiberto Zattoni^a, Alexandre Mottrie^b

Review: Radical prostatectomy: comparisons of different approaches
 Comparison: 06 Continence rate
 Outcome: 07 12-mo continence rate: RRP vs RARP



Review: Radical prostatectomy: comparisons of different approaches
 Comparison: 06 Continence rate
 Outcome: 09 12-mo continence rate: LRP vs RARP

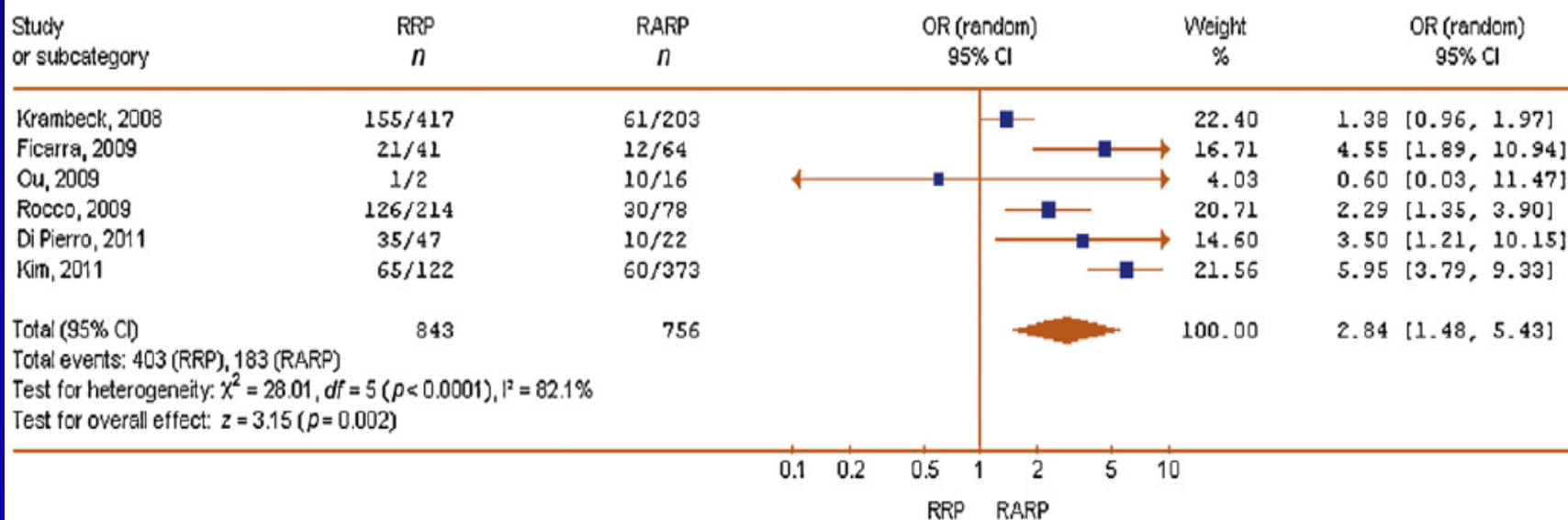


For the first time data of a statistically significant advantage in favor of RARP in comparison with both RRP and LRP in terms of 12-mo urinary continence recovery.

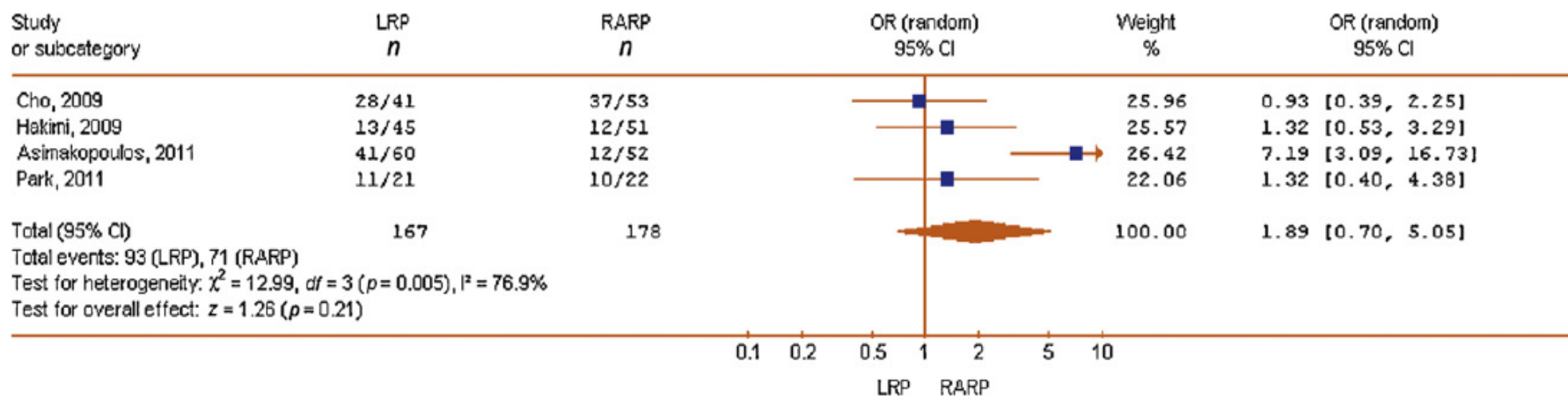
Systematic Review and Meta-analysis of Studies Reporting Potency Rates After Robot-assisted Radical Prostatectomy

Vincenzo Ficarra^{a,b,*}, Giacomo Novara^a, Thomas E. Ahlering^c, Anthony Costello^d, James A. Eastham^e, Markus Graefen^f, Giorgio Guazzoni^g, Mani Menon^h, Alexandre Mottrie^b, Vipul R. Patelⁱ, Henk Van der Poel^j, Raymond C. Rosen^k, Ashutosh K. Tewari^l, Timothy G. Wilson^m, Filiberto Zattoni^a, Francesco Montorsi^g

Review: Radical prostatectomy: comparisons of different approaches
 Comparison: 11 Potency rate
 Outcome: 01 12-mo potency rate: RRP vs RARP



Review: Radical prostatectomy: comparisons of different approaches
 Comparison: 11 Potency rate
 Outcome: 02 12-mo ptency rate: LRP vs RARP



- Statistically significant advantage in favor of RARP in comparison with LRP in terms of 12-mo potency recovery.
- Considering the limitations due to the limited number of patients in studies comparing RARP and LRP, there is a nonstatistically significant trend in favor of RARP

Systematic Review and Meta-analysis of Perioperative Outcomes and Complications After Robot-assisted Radical Prostatectomy

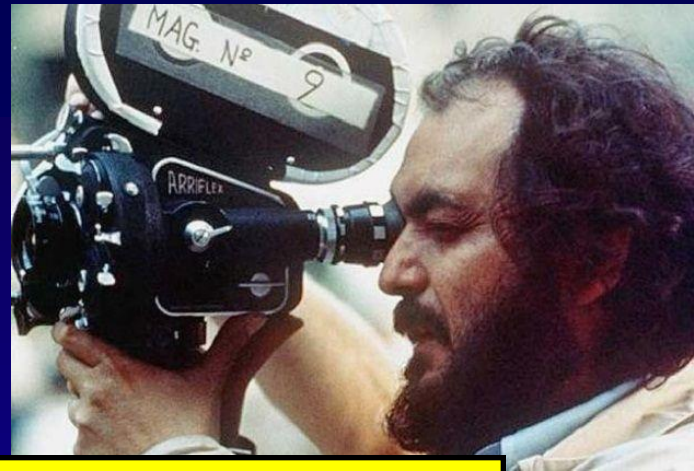
Giacomo Novara^{a,}, Vincenzo Ficarra^{a,b}, Raymond C. Rosen^c, Walter Artibani^d, Anthony Costello^e, James A. Eastham^f, Markus Graefen^g, Giorgio Guazzoni^h, Shahrokh F. Shariatⁱ, Jens-Uwe Stolzenburg^j, Hendrik Van Poppel^k, Filiberto Zattoni^a, Francesco Montorsi^l, Alexandre Mottrie^b, Timothy G. Wilson^m*

- RARP vs RRP: blood loss and transfusion rates lower
- RARP vs LRP: transfusion rates lower
- Overall complication rate were similar regardless of surgical approach

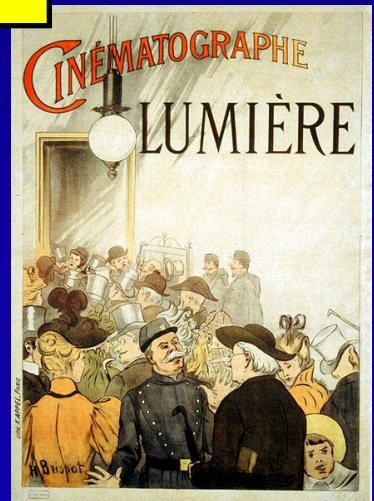
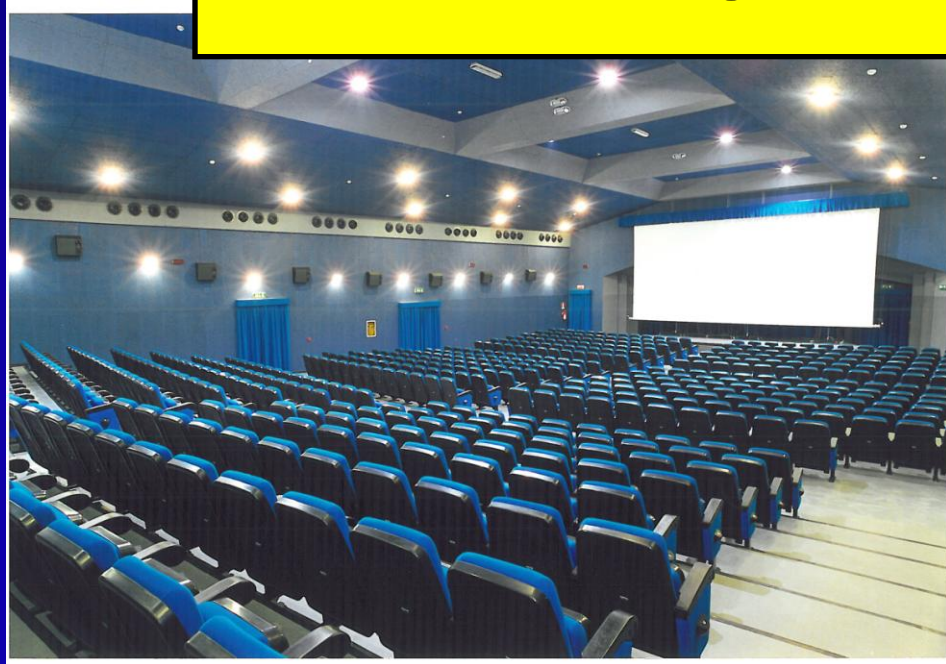
Best Practices in Robot-assisted Radical Prostatectomy: Recommendations of the Pasadena Consensus Panel

Francesco Montorsi^{a,}, Timothy G. Wilson^b, Raymond C. Rosen^c, Thomas E. Ahlering^d,
Walter Artibani^e, Peter R. Carroll^f, Anthony Costello^g, James A. Eastham^h, Vincenzo Ficarraⁱ,
Giorgio Guazzoni^j, Mani Menon^k, Giacomo Novaraⁱ, Vipul R. Patel^l, Jens-Uwe Stolzenburg^m,
Henk Van der Poelⁿ, Hein Van Poppel^o, Alexandre Mottrie^p*

- 2 days panel of 17 world leaders in PCa and RP
- Absence of high quality randomized controlled clinical trials comparing RARP vs RRP
- Surgeon experience and institutional volume predict better outcomes at all levels



VIDEO TIME



RARP in high risk PCa

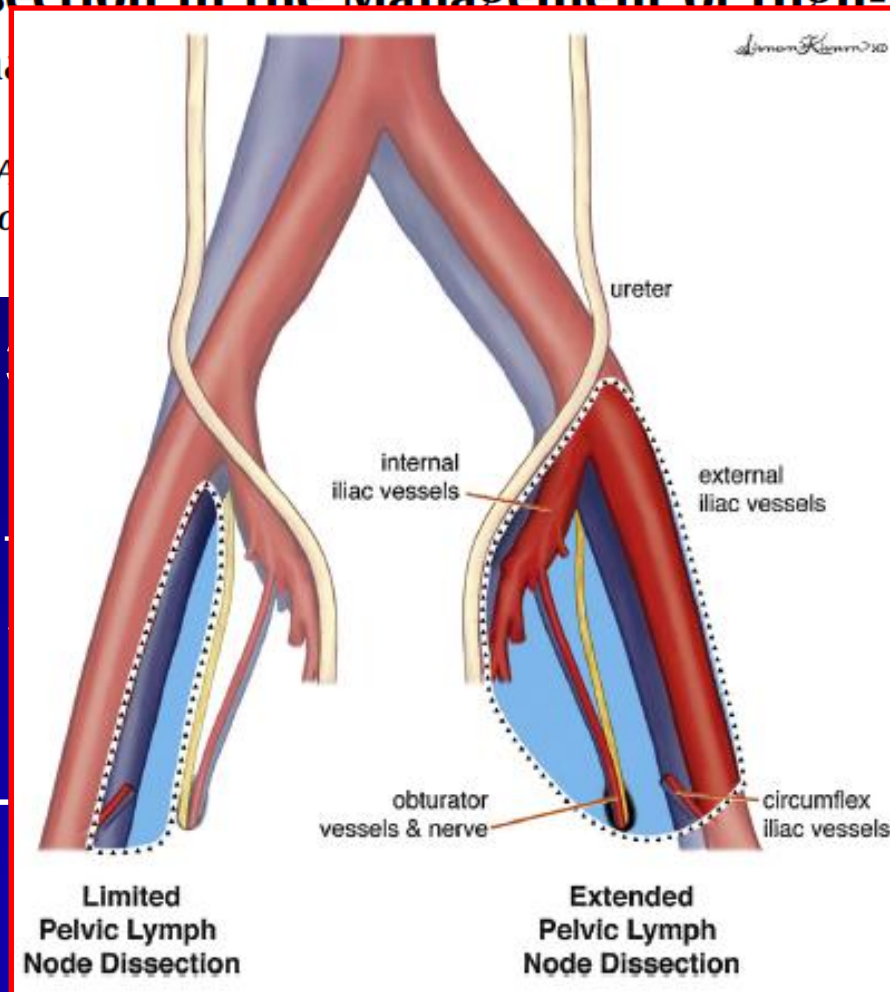
The Role of Robot-assisted Radical Prostatectomy and Pelvic Lymph Node Dissection in the Management of High-risk Prostate Cancer: A Systematic Review

Bertram Yuh^{a,*}, Walter A. Aronson^e,
Giacomo Novara^f, Ashutosh Tewari^g,
Scott E. Eggenerⁱ

Walter A. Aronson^e,
in C. Zorn^h,

- 12 papers – 1
- Relatively limited
- Short-term (3
- ALWAYS EXT

of RRP



NOSTRA CASISTICA: OTT 2014 - MAR 2015

Classe di rischio	n	%
Low	48	53,3
Intermediate	28	31,1
High	14	15,6

NOSTRA CASISTICA: NOV 2014 - MAR 2015

High risk

- 14 Pazienti: RARP 8 + RRP 6
- PSA medio: 18,7 (5,68 – 50) ng/ml

Gleason score bio	n	Gleason score pat	n
• 3+4	3	• 4+3	1
• 4+3	1	• 8	1
• 8	6	• 9	6
• 9	2	• 10	1
• 10	2	• n.a. (ADT)	3
cT:		pT:	
• 2	7	• 2	3
• 3	7	• 3	11
		• 4	1

NOSTRA CASISTICA: NOV 2014 - MAR 2015

High risk

	RARP	RRP
N° pazienti	8	6
Età (media)	63,75 (51-72)	68,83 (60-75)
Tempo operatorio	241 (190-300)	162 (135-240)
Perdite ematiche (media)	225 (100-550)	466 (200-700)
Giorni degenza (mediana)	4	6
N° linfonodi asportati	22,6 (7-40)	20 (11-38)

- Margini positivi: 35,7% (5/14 pz, tutti con GS \geq 8)
- N+: 28,5% (4/14 pz)
- N° medio linfonodi positivi: 6,75 (3-14)



GRAZIE PER L'ATTENZIONE

