

Ποιότητα ζωής

Δεν υπάρχει καμία σύγκριση
συμφερόντων του ομιλητή





ΑΡΤΟΥΡ
ΣΟΠΕΝΧΑΟΥΕΡ
Η ΤΕΧΝΗ
ΤΟΥ ΝΑ ΕΧΕΙΣ
ΠΑΝΤΑ ΔΙΚΙΟ

ΕΙΣΑΓΩΓΗ-ΕΠΙΜΕΤΡΟ **A.C. GRAYLING**

«Ένα εγχειρίδιο που όλοι πρέπει να διαβάσουν σήμερα».
GEORGE WALDEN

«Δαιμονικά πνευματώδες».
ALAIN DE BOTTON

 ΕΚΔΟΣΕΙΣ
ΠΑΤΑΚΗ

Αμφιλεγόμενη προώθηση της ρομποτικής χειρουργικής!

The da Vinci[®] Surgical System provides surgeons with an alternative to both traditional open surgery and conventional laparoscopy, putting a surgeon's hands at the controls of a state-of-the-art robotic platform. The *da Vinci* System enables surgeons to perform even the most complex and delicate procedures through very small incisions with unmatched precision.

For the patient, benefits may include:

- ▶ Significantly less pain
- ▶ Less blood loss
- ▶ Less scarring
- ▶ Shorter recovery time
- ▶ A faster return to normal daily activities
- ▶ And in many cases better clinical outcomes



Sexual Function/Infertility

POTENCY FOLLOWING ROBOTIC RADICAL PROSTATECTOMY: A QUESTIONNAIRE BASED ANALYSIS OF OUTCOMES AFTER CONVENTIONAL NERVE SPARING AND PROSTATIC FASCIA SPARING TECHNIQUES

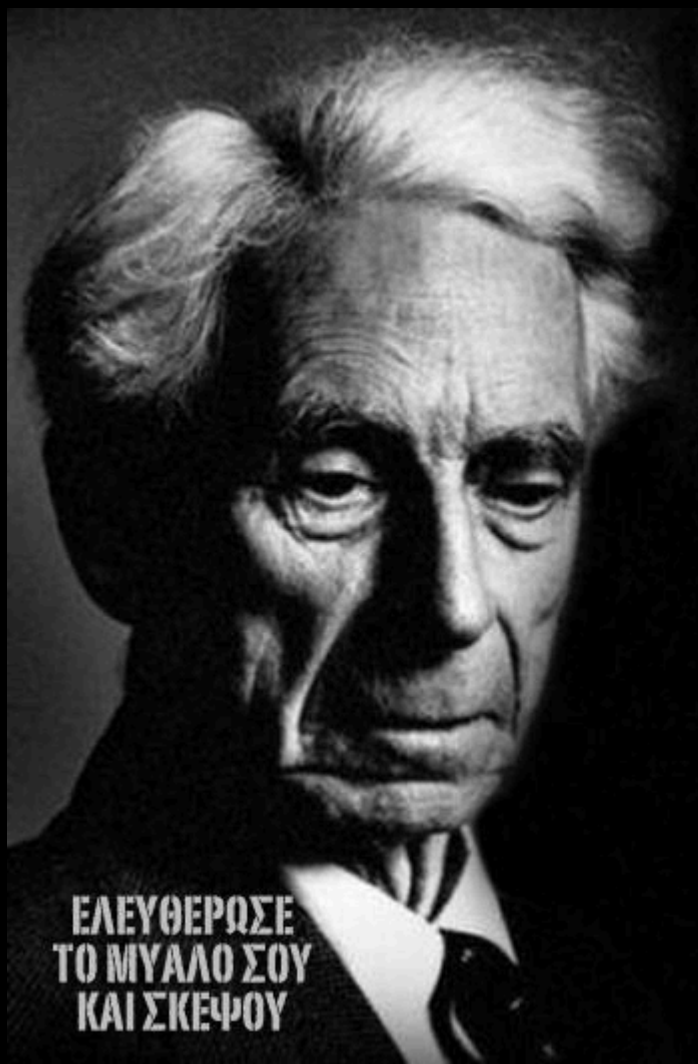
MANI MENON, SANJEEV KAUL,* AKSHAY BHANDARI, ALOK SHRIVASTAVA
ASHUTOSH TEWARI† AND ASHOK HEMAL

Results: At 12 months of followup 17 of 23 control (74%) and 34 of 35 study (97%) patients achieved erections strong enough for intercourse ($p = 0.002$). Four control (17%) and 18 study (51%) patients achieved normal erections (SHIM greater than 21) without medication ($p < 0.0001$). Six control (26%) and 30 study (86%) patients achieved normal erections with or without phosphodiesterase 5 inhibitors ($p < 0.0001$).

- 34 από τους 35 στύση επαρκή για επαφή!!!

97%

Ευχαριστούμε ρομποτική!!!



**ΕΛΕΥΘΕΡΩΣΕ
ΤΟ ΜΥΑΛΟ ΣΟΥ
ΚΑΙ ΣΚΕΨΟΥ**

**Το όλο πρόβλημα με τον κόσμο είναι
ότι οι ηλίθιοι και οι φανατικοί είναι
πάντα σίγουροι για τον εαυτό τους
και οι σοφότεροι είναι πάντα γεμάτοι
από αμφιβολίες.**

- Bertrand Russell

Είναι η ρομποτική χειρουργική καλύτερη από τη λαπαροσκοπική και ανοικτή χειρουργική?

Retropubic, Laparoscopic, and Robot-Assisted Radical Prostatectomy: A Systematic Review and Cumulative Analysis of Comparative Studies

Vincenzo Ficarra^{a,*}, Giacomo Novara^a, Walter Artibani^a, Andrea Cestari^b, Antonio Galfano^a, Markus Graefen^c, Giorgio Guazzoni^b, Bertrand Guillonneau^d, Mani Menon^e, Francesco Montorsi^f, Vipul Patel^g, Jens Rassweiler^h, Hendrik Van Poppelⁱ

Eur Urol 2009;55:1037-1063

- Μέτα-ανάλυση με 37 συγκριτικές μελέτες
- LRP and RRP = παρόμοια ποσοστά εγκράτειας και στυτικής λειτουργίας
- LRP / RRP / RALP = παρόμοια θετικά χειρουργικά όρια
- LRP + RALP = σημαντικά λιγότερη απώλεια αίματος και ποσοστό μεταγγίσεων συγκριτικά με την ανοικτή χειρουργική
- Περισσότερες μελέτες αναμένονται

2009

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

EUROPEAN UROLOGY 62 (2012) 405-417

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

2012

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

EUROPEAN UROLOGY 62 (2012) 431-452

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

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

EUROPEAN UROLOGY 62 (2012) 382-404

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

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

EUROPEAN UROLOGY 62 (2012) 418-430

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

2013 EAU RARP GUIDELINES

Oncologic outcomes

Recommendation	GR
Robotic surgery <u>does not improve oncologic outcomes;</u> surgical expertise does.	A

Continence

Conclusions	LE
RARP for localized prostate cancer is a surgical approach offering high continence rates, at least comparable to ORP and LRP.	2a
There is a <u>trend towards faster recovery of continence</u> after RARP in comparison with ORP and LRP.	3b
Recommendations	GR
To achieve better early continence results, the use of robotic technique is recommended.*	C

Potency

Conclusions	LE
There is a <u>trend towards faster recovery of potency</u> after RARP in comparison to ORP and LRP.	2a-3b
Recommendations	GR
To achieve better early potency results, the use of laparoscopy or robotic techniques are recommended.*	C

Guidelines on Robotic- and Single-site Surgery in Urology

2013 EAU RARP GUIDELINES

Oncologic outcomes

Recommendation	GR
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Robotic surgery does not improve oncologic outcomes:	A
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Μπορούν τελικά οι τάσεις προς καλύτερα αποτελέσματα να μας οδηγήσουν ότι η ρομποτική είναι η καλύτερη τεχνική?

Guideline
Robotic-
Single
Surge
Urc

LE

2a

3b

GR

C

LE

2a-3b

GR

Recommendations

To achieve better early potency results, the use of laparoscopy or robotic techniques are recommended.*

C

Erectile Function Outcome Reporting After Clinically Localized Prostate Cancer Treatment

THE JOURNAL OF UROLOGY® . 178, 597-601, August 2007

Conclusions: Clinical studies reporting erectile function outcomes after localized prostate cancer treatment often demonstrate poorly interpretable and inconsistent manners of assessment as well as widely disparate rates of erectile dysfunction and erectile function. Future studies must apply scientifically rigorous methodology and standard outcomes measures to advance this field of study.

[Urol Clin North Am](#). 2014 Nov;41(4):597-606. doi: 10.1016/j.ucl.2014.07.014. Epub 2014 Aug 20.

Models of assessment of comparative outcomes of robot-assisted surgery: best evidence regarding the superiority or inferiority of robot-assisted radical prostatectomy.

Gandaqlia G¹, Trinh QD².

KEY POINTS

- The best evidence comparing the effectiveness of robot-assisted radical prostatectomy (RARP) with open radical prostatectomy (ORP) for patients with clinically localized prostate cancer (PCa) is based on observational retrospective studies.
- The adoption of standardized endpoints is mandatory when evaluating the comparative effectiveness of different surgical approaches for the treatment of PCa.
- The currently available retrospective studies evaluating oncologic and nononcologic outcomes of RARP are limited by selection bias, short follow-up, and the inclusion of patients for the most part treated in high-volume tertiary referral centers.
- Well-designed prospective investigations are needed to comprehensively assess the benefits of RARP compared with other treatment modalities in patients with clinically localized PCa.

Υψηλό επίπεδο δεδομένων RARP vs LRP: μόνο 2 RCT

Asimakopoulos AD, Pereira Fraga CT, Annino F, Pasqualetti P, Calado AA, Mugnier C: Randomized comparison between laparoscopic and robot-assisted nerve-sparing radical prostatectomy. J Sex Med 2011;8:1503-1512.

- **64 RARP vs 64 LRP**
- Operated 2007-2008 by a single surgeon

- Primary end-point: 12 month potency
- Secondary end points: continence/ complications/ oncology outcomes

Porpiglia F, Morra I, Lucci Chiarissi M, Manfredi M, Mele F, Grande S, Ragni F, Poggio M, Fiori C: Randomised controlled trial comparing laparoscopic and robot-assisted radical prostatectomy. Eur Urol 2013;63:606-614.

- **60 RARP vs 60 LRP**
- Operated 2010-2012 by a single surgeon

- Primary end-point: 3 month continence
- Secondary end-points: continence and potency at different intervals

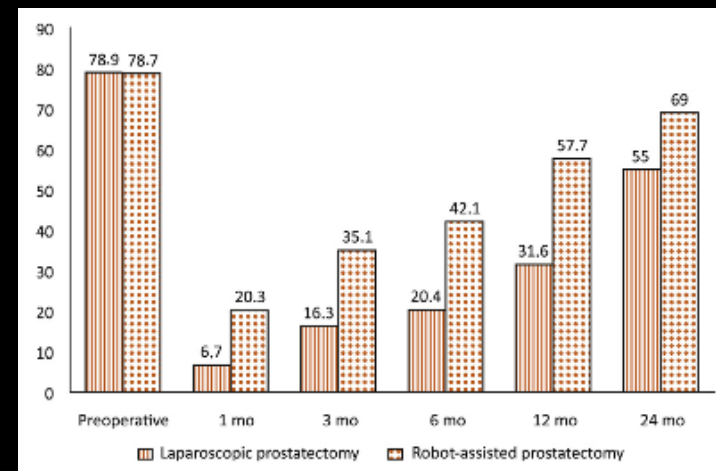
Comparisons of the Perioperative, Functional, and Oncologic Outcomes After Robot-Assisted Versus Pure Extraperitoneal Laparoscopic Radical Prostatectomy

EUROPEAN UROLOGY 65 (2014) 610–619

Guillaume Ploussard *, Alexandre de la Taille, Morgan Moulin, Dimitri Vordos, Andras Hoznek, Claude-Clément Abbou, Laurent Salomon

Ριζικές προστατεκτομές
 Λαπαροσκοπικές: 1377
 Ρομποτικές: 1009

Δεν είναι τυχαιοποιημένη



	Ρομποτική	Λαπαροσκοπική
Περιστατικά	1009	1377
Εγκράτεια 6 μήνες	72%	59%
Εγκράτεια 12 μήνες	75.5%	68.5%
Στυτική λειτουργία 6 μήνες	42%	20%
Στυτική λειτουργία 12 μήνες	57.7%	31.6%

Comparisons of the Perioperative, Functional, and Oncologic Outcomes After Robot-Assisted Versus Pure Extraperitoneal Laparoscopic Radical Prostatectomy

Στυτική λειτουργία
ΜΟΝΟ 57.7%!!!

Τα αποτελέσματα δεν
βελτιώθηκαν με το
χρόνο???

Στυτική λειτουργία 12 μήνες

57.7%

31.6%

ΠΟΙΟΤΗΤΑ ΖΩΗΣ

Eur Urol. 2015 Mar;37(3):432-8. doi: 10.1016/j.eururo.2014.01.039. Epub 2014 Feb 11.

Benchmarks for operative outcomes of robotic and open radical prostatectomy: results from the Health Professionals Follow-up Study.

Alemozaffar M¹, Sanda M², Yecies D³, Mucci LA⁴, Stampfer MJ⁴, Kenfield SA⁵.

CONCLUSIONS: In a nationwide cohort of patients undergoing surgical treatment for prostate cancer, RALP was associated with shorter hospital stay, and lower blood loss and transfusion rates than RRP. Surgical oncologic and HRQOL outcomes were similar between groups.

Prospective comparison of the impact of robotic-assisted laparoscopic radical prostatectomy versus open radical prostatectomy on health-related quality of life and decision regret (UJA) • January-February 2014 • Volume 8, Issues 1-2

B. Joyce Davison, RN, PhD; Andrew Matthew, PhD, CPsych;† Abbie M. Gardner MSc and Applied Statistics¹⁵*

Conclusion: The results of our study found no significant difference in health-related quality of life outcomes based on surgical procedure at 12 months. Moreover, patients in both groups reported low levels of decision regret at 12 months. Further multi-site prospective studies are required to address this study's limitations.

ΠΟΙΟΤΗΤΑ ΖΩΗΣ

BJU Int. 2015 Nov 7. doi: 10.1111/bju.13380. [Epub ahead of print]

Comparison of oncological and health related quality of life (HRQOL) outcomes between open (ORP) and robotic-assisted radical prostatectomy (RARP) for localized prostate cancer - findings from the population-based Victorian Prostate Cancer Registry (PCR).

Onq WL^{1,2}, Evans SM², Spelman T^{2,3}, Kearns PA⁴, Murphy DG^{5,6}, Millar JL^{2,7}.

CONCLUSION: We reported a large population-based comparative study on ORP and RARP with better short-term oncological outcomes favouring RARP, but no significant differences in HRQOL outcomes. The results have to be interpreted, taking into account significant surgeon heterogeneity, in a population-based study. This article is protected by copyright. All rights reserved.

[Experienced Open Vs. Early Robotic-Assisted Laparoscopic Radical Prostatectomy: a 10 Year Prospective/Retrospective Comparison.](#)

Jackson MA, Bellas N, Siegrist T, Haddock P, Staff I, Laudone V, Wagner JR.

Urology. 2016 Feb 12. pii: S0090-4295(16)00117-5. doi: 10.1016/j.urology.2015.12.072. [Epub ahead of print]

10ετής παρακολούθηση: Συγκρίσιμα ογκολογικά αποτελέσματα και ποιότητα ζωής

A Prospective Study of Transition From Laparoscopic to Robot-assisted Radical Prostatectomy: Quality of Life Outcomes After 36-Month Follow-up

Viktor Berge, Rolf E. Berg, Jon R. Hoff, Nicolai Wessel, Lien M. Diep, Steinar J. Karlsen, and Lars M. Eri

Προοπτική μελέτη

Urology 2013

Τελευταίες 210 λαπαροσκοπικές vs πρώτες 210 ρομποτικές

**Δεν υπήρχε διαφορά στα λειτουργικά αποτελέσματα,
καμία διαφορά στο δείκτη ενοχλημάτων!**

Introduction of RALP did not result in improvement of functional outcome. There was no difference regarding urologic function/bother score or sexual function/bother score at 36-month follow-up in patients treated with LRP or RALP. UROLOGY 81: 781–786, 2013. © 2013 Elsevier Inc.

Open Versus Laparoscopic Versus Robot-Assisted Laparoscopic Prostatectomy: The European and US Experience.

Finkelstein J, Eckersberger E, Sadri H, Taneja SS, Lepor H, Djavan B.
Rev Urol. 2010 Winter;12(1):35-43.

It has been suggested that patients who chose the innovative, less invasive RALRP may have higher expectations for their postoperative health-related quality of life as compared with patients who chose more traditional surgery.

While a surgeon is learning a new technique, numerous patients may achieve outcomes inferior to what they might otherwise have obtained with an experienced surgeon.

J Urol. 2007 Aug;178(2):478-82. Epub 2007 Jun 11.

A direct comparison of robotic assisted versus pure laparoscopic radical prostatectomy: a single institution experience.

Rozet F¹, Jaffe J, Braud G, Harmon J, Cathelineau X, Barret E, Vallancien G.

CONCLUSIONS: We demonstrated that the laparoscopic extraperitoneal radical prostatectomy is equivalent to the robotic assisted laparoscopic prostatectomy in the hands of skilled laparoscopic urological surgeons at our institution with respect to operative time, operative blood loss, hospital stay, length of bladder catheterization and positive margin rate.

2015

EAU Guidelines on Prostate Cancer

	L.E.	G.R.
In patients who are surgical candidates for radical prostatectomy, <u>all approaches</u> (i.e. open, laparoscopic or robotic) <u>are acceptable because none has clearly shown superiority in terms of functional or oncological results.</u>	1a	A

Εργονομία

Ergonomic analysis of robot-assisted and traditional laparoscopic procedures

Ahmed M. Zihni · Ikechukwu Ohu · Jaime A. Cavallo ·
Sohyung Cho · Michael M. Awad

- Η ανάλυση της εργονομίας δείχνει σημαντικά αυξημένη δραστηριότητα των δικεφάλων, τρικεφάλων και δελτοειδών

Physical strain and urgent need for ergonomic training among gynecologic oncologists who perform minimally invasive surgery[☆]

Jason Franasiak^{a,*}, Emily M. Ko^b, Juli Kidd^a, Angeles Alvarez Secord^c, Maria Bell^d,
John F. Boggess^b, Paola A. Gehrig^b

Gynecologic Oncology 126 (2012) 437–442

- 88% των ελάχιστα επεμβατικών χειρουργών ανέφεραν μυοσκελετική καταπόνηση!!

Είναι εμφανές ότι η ρομποτική χειρουργική είναι πιο «άνετη» για το χειρουργό!



...μετά 2 περιστατικά
ρομποτικής προστατεκτομής



...μετά 2 περιστατικά
λαπαροσκοπικής
προστατεκτομής

Patients Benefit While Surgeons Suffer: An Impending Epidemic

J Am Coll Surg 2010;210:306–313.

Adrian Park, MD, FACS, Gyusung Lee, PhD, F Jacob Seagull, PhD, Nora Meenaghan, MD,
David Dexter, MD

J Robotic Surg (2007) 1:61–67
DOI 10.1007/s11701-007-0016-z

ORIGINAL ARTICLE

Postural ergonomics during robotic and laparoscopic gastric bypass surgery: a pilot project

Elise H. Lawson · Myriam J. Curet · Barry R. Sanchez ·
Rob Schuster · Ramon Berguer

- Πλεονέκτημα της ρομποτικής: ανώτερη τμήμα της ράχης, ώμους, βραχίονες, αντιβράχια, καρπούς, άκρες χείρες.
- Μειονέκτημα: κορμός, αυχέννας

Original Article

Ergonomic Deficits in Robotic Gynecologic Oncology Surgery: A Need for Intervention

Renatta Craven, MS¹, Jason Franasiak, MD¹, Prithima Mosaly, PhD, and Paola A. Gehrig, MD*

Surg Endosc (2014) 28:456–465
DOI 10.1007/s00464-013-3213-z



Comparative assessment of physical and cognitive ergonomics associated with robotic and traditional laparoscopic surgeries

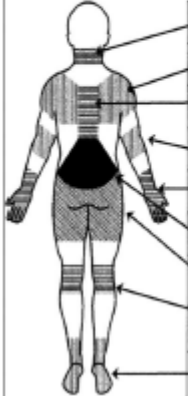
Gyusung I. Lee · Mija R. Lee · Tamera Clanton ·
Erica Sutton · Adrian E. Park · Michael R. Marohn

- Η εργονομία της ρομποτικής είναι **λιγότερο δύσκολη**
- Κάποια στοιχεία εργονομίας **σχετίζεται με την χειρουργική επιδεξιότητα**
- Επωφελούνται περισσότερο οι έμπειροι ρομποτικοί χειρουργοί
- **Ανάγκη για καλά δομημένη εκπαίδευση**

Feasibility and Acceptance of a Robotic Surgery Ergonomic Training Program

Jason Fransiak, MD, Renatta Craven, BS, Prithima Mosaly, PhD, Paola A. Gehrig, MD

Conclusion: Thus, at a high-volume robotics center, evidence-based ET was easily implemented, well-received, changed some surgeons' practice, and decreased self-reported strain related to robotic surgery.



	Have you at any time during the last 12 months had trouble (such as ache, pain, discomfort, numbness) in:	During the last 12 months have you been prevented from carrying out normal activities (e.g. job, housework, hobbies) because of this trouble in:	During the last 12 months have you seen a physician for this condition:	During the last 7 days have you had trouble in:
NECK	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
SHOULDERS	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
UPPER BACK	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
ELBOWS	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
WRISTS/HANDS	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
LOWER BACK	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
HIPS/THIGHS	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
KNEES	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
ANKLES/FEET	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes

Musculoskeletal disorders among robotic surgeons: A questionnaire analysis

Archivio Italiano di Urologia e Andrologia 2014; 86, 2

Claudio Giberti¹, Fabrizio Gallo¹, Luca Francini², Alessio Signori³, Marco Testa²

- Μυοσκελετικές διαταραχές με επίπτωση στην καθημερινή δραστηριότητα των ρομποτικών χειρουργών
- Έλλειψη εργονομικής θέσης
- Σταθερή θέση της κονσόλας που μπορεί να επηρεάσει τη στάση της ΣΣ
- Βελτιστοποίηση της θέσης

Τρισδιάστατη απεικόνιση στη Λαπαροσκοπική

- Η έλλειψη απεικόνισης του χώρου αποτελεί πρόβλημα από τα πρώτα βήματα της λαπαροσκοπικής
- Η χειρουργική ομάδα έχει αντίληψη του χώρου βάσει εμμέσων σημείων (π.χ σκιές). – απαιτείται εμπειρία



ENDOEYE Flex
Olympus

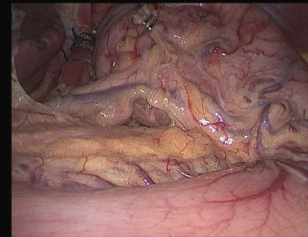
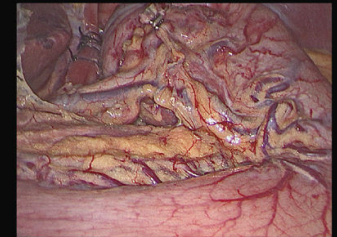


Image 1® HD
(EXISTING Technology)



SPIES Clara™ + SPIES Chroma®
(NEW Technology)



SPIES Karl Storz

Εκπαίδευση

Χειρουργική εκπαίδευση

Modular training for residents with no prior experience with open pelvic surgery in endoscopic extraperitoneal radical prostatectomy.

Stolzenburg JU, Rabenalt R, Do M, Horn LC, Liatsikos EN.
Eur Urol. 2006 Mar;49(3):491-8; discussion 499-500. Epub 2005 Dec 6.

VS




Χειρουργική εκπαίδευση

Modular training for residents with no prior experience with open pelvic surgery in endoscopic extraperitoneal radical prostatectomy.

Stolzenburg JU, Rabenalt R, Do M, Horn LC, Liatsikos EN.
Eur Urol. 2006 Mar;49(3):491-8; discussion 499-500. Epub 2005 Dec 6.

VS



560.000€ + βοηθό!!!

Goonewardene et al.
World J Urol 2016

Καμπύλη εκμάθησης

Η καμπύλη εκμάθησης της Ρομποτικής



Ποδήλατο ή βιολί;

Learning curves for urological procedures: a systematic review

Hamid Abboudi, Mohammed Shamim Khan, Khurshid A. Guru*, Saied Froghi†, Gunter de Win‡, Hendrik Van Poppel§, Prokar Dasgupta and Kamran Ahmed

BJU Int 2014; 114: 617-629

Ριζική προστατεκτομή

- Ανοικτή: 10 ως >1000
- Ρομποτική: 20 ως 1600!!!!
- Λαπαροσκοπική: 200 ως 750

Σημαντικό πως γίνεται η αξιολόγηση!!!

+

Κριτική αξιολόγηση της βιβλιογραφίας

Evaluating the Learning Curve of Experienced Laparoscopic Surgeons in Robot-Assisted Radical Prostatectomy

Jens-Uwe Stolzenburg, MD, PhD,¹ Hasan A.R. Qazi, MD,¹ Sigrun Holze, PhD,¹ Meinhard Mende, PhD,² Martin Nicolaus,¹ Toni Franz,¹ Phuc Ho Thi,¹ Anja Dietel,¹ Evangelos Liatsikos, MD, PhD,³ and Minh Do¹

- Χειρουργικό και ογκολογικό αποτέλεσμα αντίστοιχο για τις δύο τεχνικές
- Έλλειψη της απότομης καμπύλης εκμάθησης για τους έμπειρους λαπαροσκόπους

Do laparoscopic skills transfer to robotic surgery?

Lucian Panait, MD,^{a,b} Shohan Shetty, MD,^{a,*} Patricia A. Shewokis, PhD,^{c,d} and Juan A. Sanchez, MD, FACS, MPA^{a,e}

JOURNAL OF SURGICAL RESEARCH 187 (2014) 53–58

Conclusions: For simple tasks, participants with preexisting skills perform worse with the robot. However, with increasing task difficulty, robotic performance is equal or better than laparoscopy. Laparoscopic skills appear to readily transfer to a robotic platform, and difficult tasks such as IS are actually enhanced, even in subjects naive to the technology.

Είναι η καμπύλη εκμάθησης της ρομποτικής μικρότερη;

EUROPEAN UROLOGY 65 (2014) 521–531

available at www.sciencedirect.com
journal homepage: www.europeanurology.com



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Platinum Priority – Prostate Cancer
Editorial by Andrew J. Vickers on pp. 532–533 of this issue

Superior Quality of Life and Improved Surgical Margins Are Achievable with Robotic Radical Prostatectomy After a Long Learning Curve: A Prospective Single-surgeon Study of 1552 Consecutive Cases

James E. Thompson^{a,b,c,*}, Sam Egger^d, Maret Böhm^b, Anne-Maree Haynes^b, Jayne Matthews^a, Krishan Rasiah^a, Phillip D. Stricker^{a,b,c}

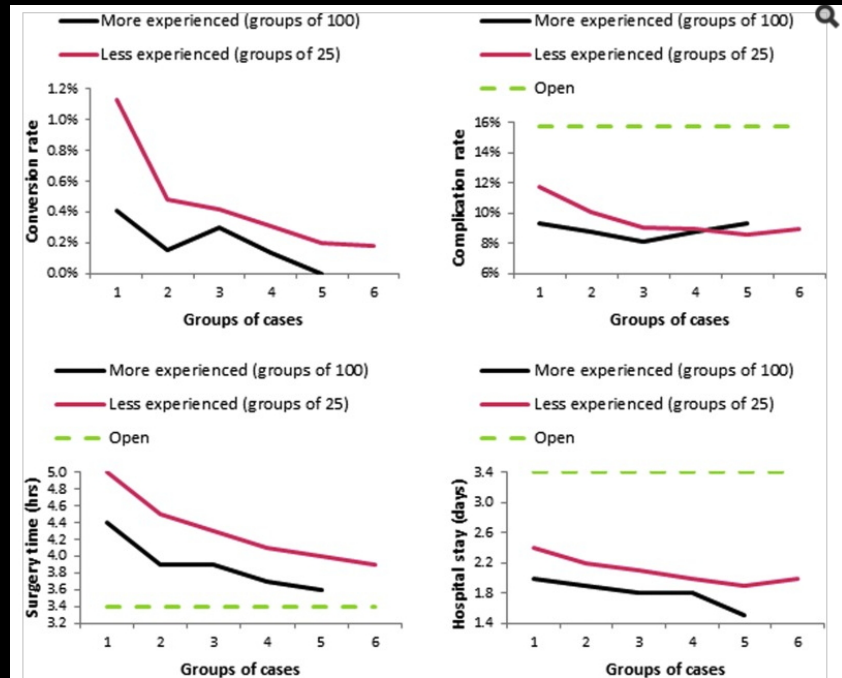
	Ξεπέρασαν ανοικτή προστατεκτομή	Έφτασαν πλατό
Σεξουαλική λειτουργία	99	600-700
Πρώιμη εγκράτεια	182	700-800
Θετικά χειρουργικά όρια	108	200-300

J Endourol. 2014 May 1; 28(5): 560–566.
doi: [10.1089/end.2013.0534](https://doi.org/10.1089/end.2013.0534)

PMCID: PMC3995359

Learning Curve Assessment of Robot-Assisted Radical Prostatectomy Compared with Open-Surgery Controls from the Premier Perspective Database

John W. Davis, MD, FACS,¹ Usha S. Kreaden, MSc,² Jessica Gabbert, BSc,³ and Raju Thomas, MD, FACS, MHA⁴



Jonckheere-Terpstra test for trend in the footnotes.¹⁶
Conversion rate among less experienced surgeons p<0.0001, more experienced surgeons p=0.0195
Complications among less experienced surgeons p<0.0001, more experienced surgeons p=0.0048
Surgery time among less experienced surgeons p<0.0001, more experienced surgeons p<0.0001
Hospital stay among less experienced surgeons p<0.0001, more experienced surgeons p<0.0001

Τελικά απαιτούνται εκατοντάδες περιστατικά για να φτάσει την ανοικτή χειρουργική

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Platinum Priority – Prostate Cancer

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- Ένας χειρουργός με μεγάλο όγκο περιστατικών δικαιολογεί την καμπύλη εκμάθησης.
- Ένας χειρουργός προς το τέλος της καριέρας του με μικρό όγκο περιστατικών δε δικαιολογεί την ανωτέρω καμπύλη.



Platinum Priority – Editorial

Referring to the article published on pp. 216–225 of this issue

A Prospective Controlled Nonrandomized Trial of Robotic Versus Open Radical Prostatectomy: On Point but Still Missed?

Thomas E. Ahlering*

“Time for learning should and apparently does best explain why RARP still misses a clear superiority over the other approaches”.

Κόστος



Δικαιολογεί η ρομποτική τεχνολογία το κόστος;

- Μονοπώλιο της ρομποτικής πλατφόρμας
- Πίεση από την αγορά για την εγκατάσταση της ρομποτικής πλατφόρμας
- Πολύ σημαντικό θέμα στις αναπτυσσόμενες χώρες και στις χώρες που επηρεάζονται από την οικονομική κρίση

available at www.sciencedirect.com
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Prostate Cancer

Cost Comparison of Robotic, Laparoscopic, and Open Radical Prostatectomy for Prostate Cancer

*Christian Bolenz^{a,b}, Amit Gupta^a, Timothy Hotze^a, Richard Ho^a, Jeffrey A. Cadeddu^a,
Claus G. Roehrborn^a, Yair Lotan^{a,*}*

- Υψηλότερο κόστος για τη ρομποτική
- Αυξημένο κόστος για υλικά
- Αυξημένο κόστος συνολικά του χειρουργείου

Assessing the cost effectiveness of robotics in urological surgery - a systematic review.

Ahmed et al, BJUI 2012

- Η ρομποτική ριζική προστατεκτομή παραμένει ακριβότερη (\$2000-\$39,215) από τη λαπαροσκοπική (\$740-\$29,771) και την ανοικτή ριζική προστατεκτομή (\$1870-\$31,518).
- Η διαφορά οφείλεται στην αγορά του συστήματος, συντήρηση και αγορά εργαλείων.
- Η μειωμένη νοσηλεία και διάρκεια χειρουργείου **δεν αμβλύνει το επιπλέον κόστος**

UK's NHS economic analysis of minimal invasive surgery for prostate cancer surgery

Systematic review and economic modelling of the relative clinical benefit and cost-effectiveness of laparoscopic surgery and robotic surgery for removal of the prostate in men with localised prostate cancer.

- Η ρομποτική θα είναι πάντα πιο δαπανηρή για το NHS λόγω του αρχικού κεφαλαίου απόκτησης και του κόστους συντήρησης του ρομποτικού συστήματος.
- Το επιπλέον κόστος θα μειωθεί εφόσον μειωθεί το κόστος απόκτησης και πραγματοποιούνται τουλάχιστον 100–150 επεμβάσεις το χρόνο.

Comparative Cost-effectiveness of Robot-assisted and Standard Laparoscopic Prostatectomy as Alternatives to Open Radical Prostatectomy for Treatment of Men with Localised Prostate Cancer: A Health Technology Assessment from the Perspective of the UK National Health Service

EUROPEAN UROLOGY 64 (2013) 361-369

*Andrew Close^a, Clare Robertson^b, Stephen Rushton^a, Mark Shirley^a, Luke Vale^c,
Craig Ramsay^b, Robert Pickard^{d,*}*

Το υψηλότερο κόστος στη ριζική προστατεκτομή θα αποσβεστεί εφόσον:

- Το περιορισμένο κέρδος στη παροχή υγείας (λιγότερο ρίσκο για επιπλοκές και χειρουργικά όρια) συνδυαστεί με >150 περιστατικά ανά έτος.
- Απουσία τυχαιοποιημένων μελετών

[BJU Int.](#) 2015 May;115(5):753-63. doi: 10.1111/bju.12866. Epub 2014 Oct 22.

Contemporary practice and technique-related outcomes for radical prostatectomy in the UK: a report of national outcomes.

[Laird A](#), [Fowler S](#), [Good DW](#), [Stewart GD](#), [Srinivasan V](#), [Cahill D](#), [Brewster SF](#), [McNeill SA](#); [British Association of Urological Surgeons \(BAUS\)](#).

CONCLUSION: Most RPs in the UK are performed using minimally invasive techniques, which offer reduced blood loss and transfusion rates compared with ORP. The operation time, complication rate, PSM rates, and association with higher volume practice support RALP as the minimally invasive technique of choice, which could have implications for regions without access to such services. The disparity in outcomes between this national study and high-volume single centres, most probably reflects the low median national case volume, and combined with the positive effect of high case volume on multivariate analysis of surgical outcomes and PSM rates, strengthens the argument for centralisation of services.

[BJU Int.](#) 2015 Sep 9. doi: 10.1111/bju.13317. [Epub ahead of print]

Patterns-of-care and health economic analysis of robot-assisted radical prostatectomy in the Australian public health system.

[Basto M](#)^{1,2,3}, [Sathianathan N](#)¹, [Te Marvelde L](#)^{4,5}, [Ryan S](#)¹, [Goad J](#)^{1,6}, [Lawrentschuk N](#)^{1,7}, [Costello AJ](#)^{2,3,8}, [Moon DA](#)^{1,3,8,9}, [Heriot AG](#)^{1,2}, [Butler J](#)¹⁰, [Murphy DG](#)^{1,2,3,8}.

CONCLUSIONS: Over the period studied, RARP has become the dominant approach to RP, with significantly shorter LOS and lower blood transfusion rate. This translates to a significant cost-offset, which is further enhanced by increasing the case volume, extending the lifespan of the robot and reductions in the cost of consumables and capital.

[Appl Health Econ Health Policy.](#) 2015 Oct;13(5):457-67. doi: 10.1007/s40258-015-0185-2.

A Systematic Review of Economic Evaluations of the Use of Robotic Assisted Laparoscopy in Surgery Compared with Open or Laparoscopic Surgery.

[Tandoqdu Z](#)^{1,2}, [Vale L](#)², [Fraser C](#)³, [Ramsay C](#)⁴.

CONCLUSION: The clinical evidence available for RAL overall and used within included studies is limited. RAL surgery costs were consistently higher than open and laparoscopic surgery. Therefore, in adopting the robotic technology decision makers need to take into account the cost effectiveness within their own systems. Economic models generated and published for radical prostatectomy and hysterectomy may be adapted to other health systems if the care pathway is similar to provide locally relevant data.

Το κόστος της ρομποτικής δε έχει αλλάξει με το χρόνο!!

Costs of Radical Prostatectomy for Prostate Cancer: A Systematic Review

EUROPEAN UROLOGY 65 (2014) 316-324

Christian Bolenz^{a,*}, Stephen J. Freedland^b, Brent K. Hollenbeck^c,
Yair Lotan^d, William T. Lowrance^e, Joel B. Nelson^f, Jim C. Hu^g

- Λίγες μελέτες συγκρίνουν το άμεσο κόστος μεταξύ των τεχνικών για ριζική προστατεκτομή
- Η σχέση αποτελέσματος-κόστους πρέπει να αξιολογηθεί προτού οι νέες τεχνολογίες γίνουν αποδεκτές
- Η ρομποτική δεν αποδείχτηκε αποδοτική σε ό,τι αφορά την οικονομία των συστημάτων υγείας

for incontinence and erectile dysfunction. While the demand for RALP by surgeons and patients is high, it is unlikely that prospective studies will be performed to determine whether RALP offers a significant advantage over other approaches to RP to justify an added expense. However, spiraling health care costs and strained health care systems will demand more comprehensive study designs for the inevitable adoption of costly new technologies to treat PCa.

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