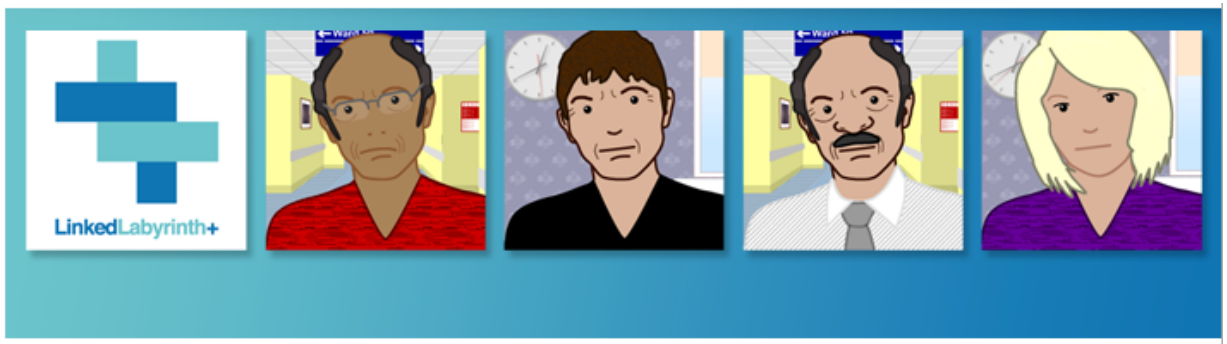


Εικονικοί ασθενείς

Στυτική λειτουργία μετά ριζική προστατεκτομή

Κ. Χατζημουρατίδης

Δ. Χατζηχρήστου

8ο Ελληνικό Διαδραστικό Σχολείο

5 - 8 Μαρτίου | Πορταριά, Πήλιο

Δήλωση συμφερόντων
Δ. Χατζηχρήστου

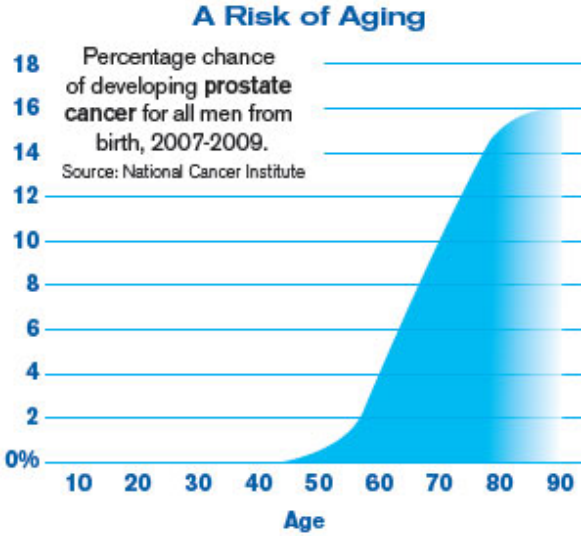
- Lilly
- Menarini
- GSK
- BAYER

Δήλωση συμφερόντων
Κ. Χατζημουρατίδης

- Lilly
- Janssen
- GSK
- Merck

Το περιστατικό (1)

- Ο Γιώργος, ηλικίας 55 χρονών, σε ετήσιο έλεγχο παρουσιάζει τριπλασιασμό του PSA σε ένα χρόνο (από 0.85 σε 2,25 – 2 μετρήσεις)
- Υποβάλλεται σε βιοψία προστάτη και διαγνώσκεται Gleason 3+3 σε 3/9 δείγματα του δεξιού λοβού, με κατάληψη 5-10-30%. Αριστερά και τα 9 χωρίς καρκίνο.
- Ο Ουρολόγος τον ενημερώνει για τις θεραπευτικές επιλογές: ακτινοβολία και ριζική προστατεκτομή

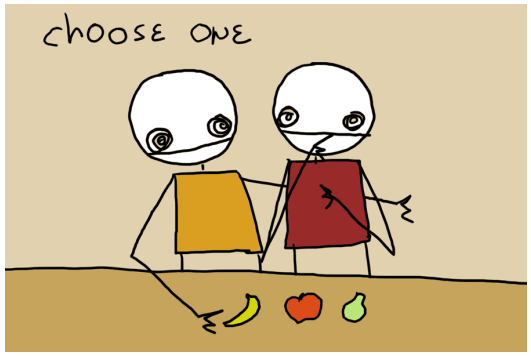


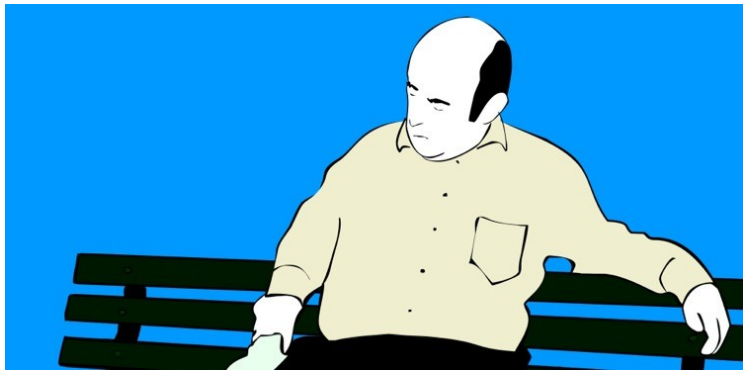
Θεραπείες καρκίνου προστάτη

Τι θεραπεία προτείνετε;

1. ακτινοβολία
2. ριζική προστατεκτομή
3. ενεργητική παρακολούθηση

Risk group	PSA level (ng/ml)	Gleason score	Clinical stage
Low	<10	≤6	T1-T2a
Intermediate	10-20	7	T2b-T2c
High	>20	8-10	T3-T4





Το περιστατικό (2)

- Ο ασθενής είναι 2η φορά παντρεμένος προ 6μηνου, με σύζυγο ηλικίας 38 ετών (δεν έχει παιδιά από τον πρώτο γάμο, λόγω προβλήματος.
- Αναφέρει οτι τον απασχολεί τρομερά το θέμα της σεξουαλικής λειτουργίας και της γονιμότητας.
- Ζητά να μάθει κάθε λεπτομέρεια για τα θέματα αυτά, αφού η θεραπευτική επιλογή για τον καρκίνο θα είναι αυτή που του εξασφαλίζει περισσότερα στα θέματα γονιμότητας και σεξουαλικής λειτουργίας.

Γονιμότητα και θεραπείες καρκίνου προστάτη

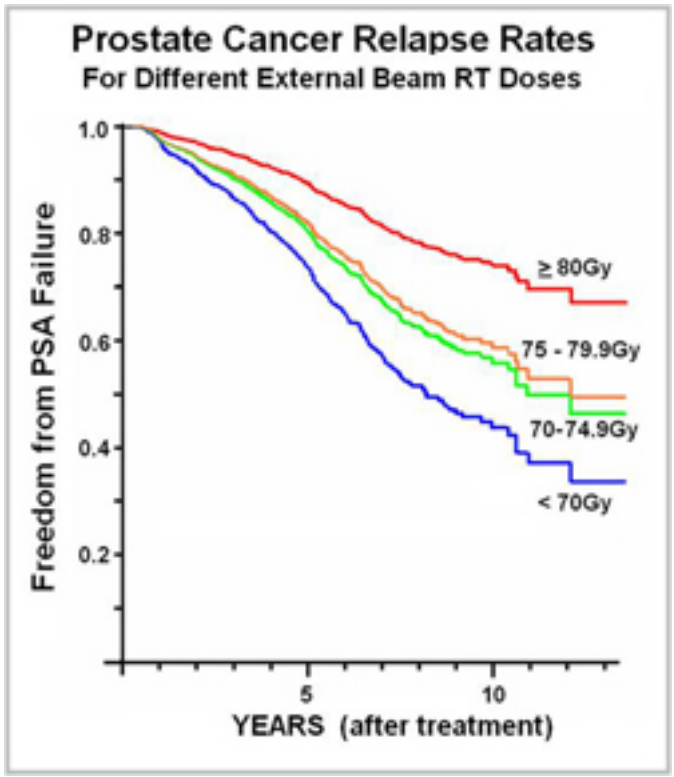
- Τι ενημέρωση θα κάνατε για τα θέματα γονιμότητας;

✓ για την ακτινοβολία

✓ για την ριζική προστατεκτομή

✓ για την ενεργητική παρακολούθηση

Εξωτερική ακτινοβολία



Γονιμότητα και βραχυθεραπεία

Aim: effects of prostatic brachytherapy on semen parameters and sperm DNA integrity, and the potential impact on fertility.

Sample

- 5 pts treated with brachytherapy.
- Data on 7,617 infertile men, each with at least 1 semen analysis and sperm DNA integrity assay, were obtained from an institutional database for comparison.
- Published data on fertile men were compared to data on those with brachytherapy for DNA fragmentation analysis.

Results

- All brachytherapy cases had normal hormonal profile.
- Specific semen parameters, such as semen volume ($p < 0.0005$), total sperm concentration ($p < 0.0004$) and percent sperm motility ($p < 0.004$), were significantly lower than normal reference values.
- All men with brachytherapy had an abnormal sperm DNA fragmentation index, indicating likely infertility in all.

Singh DK et al: J Urol. 2012 Mar;187(3):987-9

Γονιμότητα και βραχυθεραπεία

- No significant difference in pre-BT vs post-BT semen analyses in 4 patients interested in fathering children after therapy.[11] Three of the 4 men successfully impregnated the partner after the 4-month posttreatment waiting period.

  Mydlo JH, B. Lebed B: Scand J Urol Nephrol, 38 (2004), p. 221

- A case of unintentional paternity up to 40 months after treatment!

  Gomez-Iturriaga de Piña AG, et al: Urology, 75 (2010), p. 1412

Γονιμότητα: μόνο ρίσκο;

- Προλαβαίνει να κάνει παιδί;

✓ φυσιολογικά

✓ με σπερματέγχυση

✓ με εξωσωματική

Ποιές είναι οι πιθανότητες για φυσιολογική τεκνοποίηση/ κύκλο, για γόνιμο ζευγάρι με εντοπισμό της ημέρας ωορρηξίας;

- 7%
- 15%
- 35%
- 50%
- 70%

Ποιές είναι οι πιθανότητες για φυσιολογική τεκνοποίηση/ κύκλο, για γόνιμο ζευγάρι με εντοπισμό της ημέρας ωορρηξίας;

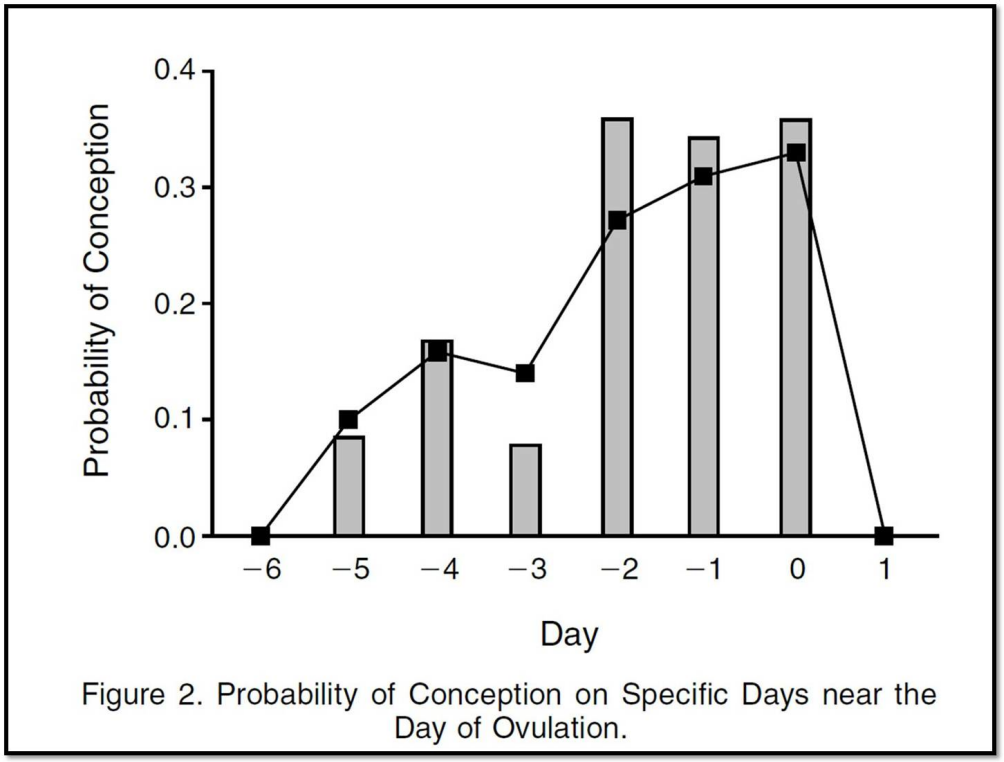


Figure 2. Probability of Conception on Specific Days near the Day of Ovulation.

Wilcox, Weinberg, & Baird, N Eng J Med, 1995

Πως μπορεί να κάνει παιδί;

Τι προτείνετε;

1. Να προσπαθήσει 12 μήνες και μετά επέμβαση
2. Να κάνει πρώτα παιδί και μέχρι τότε να μπει σε ενεργητική παρακολούθηση
3. Κατάψυξη σπέρματος, αντιμετώπιση κακρίνου και μετά υποβοηθούμενη αναπαραγωγή

Πόσο κινδυνεύει αν θελήσει να κάνει πρώτα παιδί;

1. δεν κινδυνεύει
2. ο κίνδυνος είναι μικρός
3. μόνο ο Θεός ξέρει

Πότε προτείνετε χειρουργείο για τον καρκίνο του προστάτη;

Low-risk PCa	AS candidates	pure Gleason 6
?	?	?

Πότε χειρουργούμε τον καρκίνο του προστάτη;

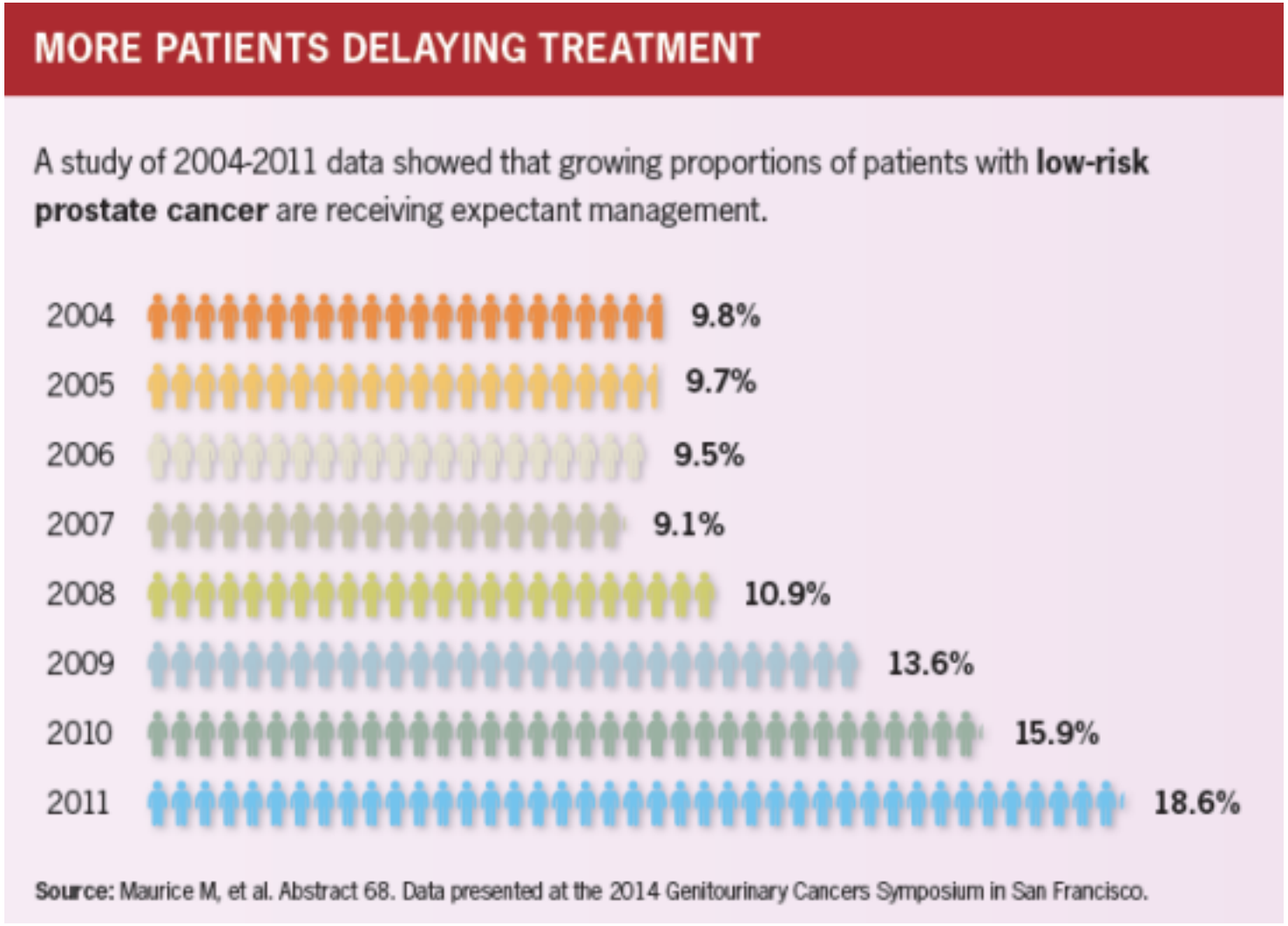
Η εμπειρία της Γερμανίας

YEAR	low-risk PCa	AS candidates	pure Gleason 6
2004	60	38.2	56.2
2011-13	27	14.7	10

- The current analysis documents a clear shift in utilization of radical prostatectomy toward significant PCa in men with long life expectancy.
- Based on patient and cancer selection as described, the long-standing discussion of overtreatment with RP might become invalid.

Huland H, Graefen M: Eur Urlo 67: 2015 DOI: 10.1016/j.eururo.2015.02.020

Πόσοι αποφασίζουν την ενεργητική παρακολούθηση;



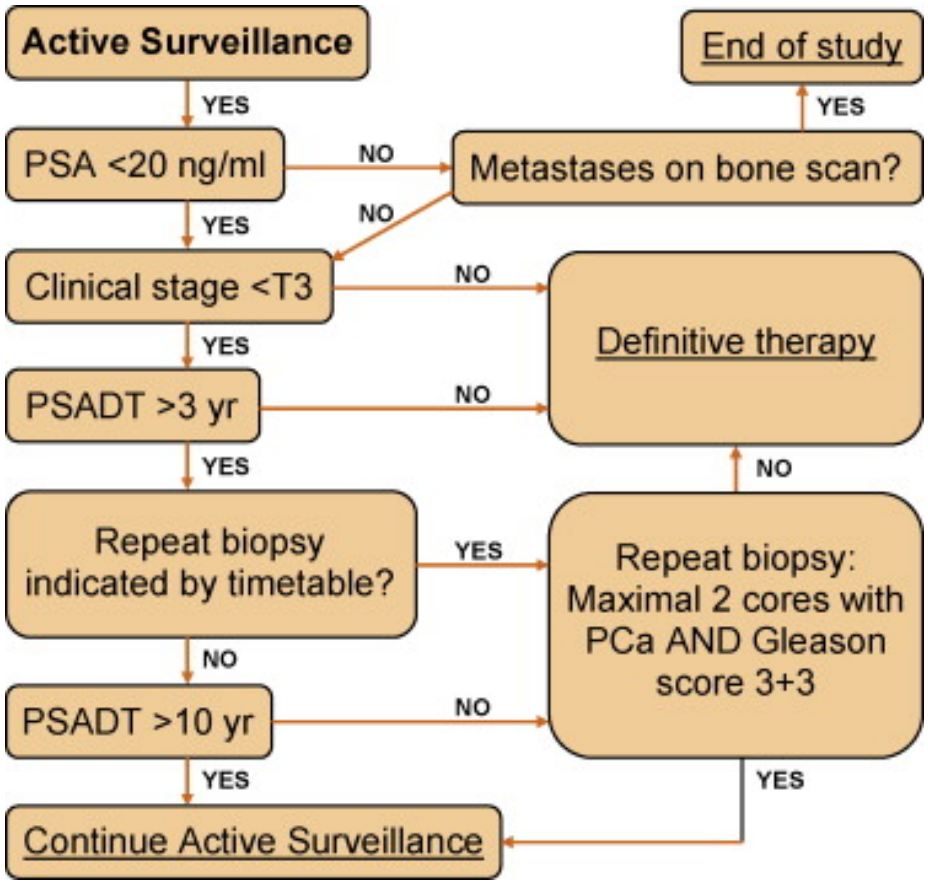
Ενεργητική παρακολούθηση: το πρωτόκολλο PRIAS

2 first years

- ✓ PSA measurements every 3 m
- ✓ Clinical examinations every 6 m

After 2nd year

- ✓ PSA measurements every 6 m
- ✓ Clinical examinations every year
- ✓ Repeat biopsies at 1, 4, 7, and 10 years



Inclusion criteria

1. Clinical stage ≤T2
2. Gleason score ≤6
3. PSA is ≤10ng/ml (PSA density is ≤0.2ng/ml/ml)

van den Bergh, RCN et al: Eur Urol, 52 :1560-1563, 2007

Ενεργητική παρακο-λούθηση

Table 3

Active Surveillance Trials in Prostate Cancer

Lead Author	Eligibility	Criteria for Intervention	Median Age	On Active Treatment	Median Follow-up	DSS	Metastasis Risk on AS	Deferred Treatment Results
Prospective Nonrandomized Trials								
Carter, 2007 [24]	T1c–T2a,[a] Gleason ≤ 6, ≤ 2 positive biopsy cores, % positive cores ≤ 50%, PSAD < 0.15 ng/mL/cm^3	Gleason ≥ 7, > 2 cores, % positive biopsy cores > 50%	65.7 yr	103 (25%)	41 mo	100%	NA	RP pathology: 20% noncur-able disease (Gleason ≥ 4+3, positive surgical margins, >T3a)
Dall-Era, 2008 [25]	T1–2, Gleason < 6, PSA < 10 ng/mL, % positive cores < 33%	Gleason ≥ 7, ↑ tu-mor volume, ↑ PSA	63.4 yr	78 (24%)	43 mo	100%	0%	Biochemical recurrence after RP: 1.3%
Klotz, 2008 [26]	T1c–T2a, Gleason ≤6, PSA ≤ 10 ng/mL[b]	PSADT< 3 yr, PSA > 10 ng/mL if initial < 10 or PSA > 2 ng/mL, PSAV > 2 ng/mL/yr	70 yr	101 (34%)	72 mo	99%	NA	RP pathology: ≥ T3a = 41%; positive nodes = 3%
van As, 2008 [27]	T1–T2a, Gleason ≤ 3+4, PSA < 15 ng/mL, % positive biopsy cores ≤ 50%	Gleason ≥ 4+3, PSAV > 1 ng/mL/yr, % positive biopsy cores > 50%	67 yr	65 (20%)	22 mo	100%	0%	Biochemical recurrence after RP: 5%
Retrospective Reviews of Multicenter Nonrandomized Trials								
van den Bergh, 2008 [28]	T1c–T2, PSA < 10 ng/mL, PSAD < 0.2 ng/mL/cm^3, Gleason ≤ 6, ≤ 2 positive biopsy cores	PSADT < 3 yr	66.3 yr	182 (32%)	47 mo	100%[c]	0.3%	Biochemical recurrence after RP: 7.7%[d]
Eggener, 2009 [29]	Life expectancy > 10 yr, age < 75, T1–2a, PSA ≤ 10 ng/mL, < 3 positive cores, Gleason ≤ 6, repeat biopsy	Preference, change in DRE or imaging, ↑ PSA, biopsy grade and/or tumor volume	64 yr	43 (16%)	29 mo	100%	0.8%	Biochemical recurrence after RP: 9%

[a]Overall, 99.8% of patients were stage T1c.

[b]For patients > 70 yr, criteria relaxed to Gleason ≤ 7 (3+4), PSA ≤ 15 ng/mL.

[c]One individual died of prostate cancer 11.2 yr after starting active surveillance. Treatment was deferred despite PSA increasing to 880 ng/mL.

[d]Defined as PSA ≥ 10 ng/mL or PSADT ≤ 3 yr.

AS = active surveillance; DRE = digital rectal examination; DSS = disease-specific survival; NA = not available; PSA = prostate-specific antigen; PSAD = PSA density; PSADT = PSA doubling time; PSAV = PSA velocity; RP = radical prostatectomy.

ONCOLOGY
October 13, 2009 | Prostate Cancer, Genitourinary Cancers, Oncology Journal
By Michael C. Large, MD and Scott E. Eggener, MD

Table 2

Watchful Waiting Trials in Prostate Cancer

Lead Author	Design	Eligibility	Median Age	Median Follow-up	Results
Prospective Randomized Trial					
Bill-Axelson, 2008 [7]	RP (n = 347) vs WW (n = 348)	T1–T2, moderately or well-differentiated, life expectancy > 10 yr, normal bone scan, PSA < 50 ng/mL	64.7 yr	130 mo	Prostate cancer death rate: WW = 19.5% RP = 13.5%
Prospective Nonrandomized Trial					
Johansson, 2004 [23]	WW (n = 223); androgen deprivation at symptomatic progression	T1–T2, well-differentiated, normal bone scan, age < 75 yr	72 yr	252 mo	Cancer-specific survival: 84% Risk of metastases: 17%
Retrospective Nonrandomized Trial					
Albertsen, 2005 [22]	WW vs immediate or delayed hormonal therapy (n = 767)	Age 65–75 yr at diagnosis, clinically localized prostate cancer	69 yr	288 mo	Deaths per 1,000 person-years: Gleason 5 = 12 Gleason 6 = 30 Gleason 7 = 65 Gleason 8–10 = 121

PSA = prostate-specific antigen; RP = radical prostatectomy; WW = watchful waiting.

ONCOLOGY
October 13, 2009 | Prostate Cancer, Genitourinary Cancers, Oncology Journal
By Michael C. Large, MD and Scott E. Eggener, MD

"If there is no difference in mortality [between active surveillance and immediate treatment], then quality of life is the defining issue."

— Mark Litwin, MD, MPH

Επιβίωση και καρκίνος προστάτη

PATIENTS AND METHODS: long-term outcome of a large active surveillance protocol in men with favorable-risk prostate cancer. Prospective single-arm cohort at a single academic health sciences center
Sample: 993 men with favorable- or intermediate-risk prostate cancer
Median follow-up: 6.4 years (range, 0.2 to 19.8 years).
RESULTS

- 15% of 993 patients died (844 alive).
- (1.5% from prostate cancer.
- **The 10- and 15-year actuarial cause-specific survival rates were 98.1% and 94.3%, respectively.**
- An additional 13 patients (1.3%) developed metastatic disease
- At 5, 10, and 15 years, 75.7%, 63.5%, and 55.0% of patients remained untreated and on surveillance.
- The cumulative hazard ratio for nonprostate-to-prostate cancer mortality was 9.2:1.

CONCLUSION

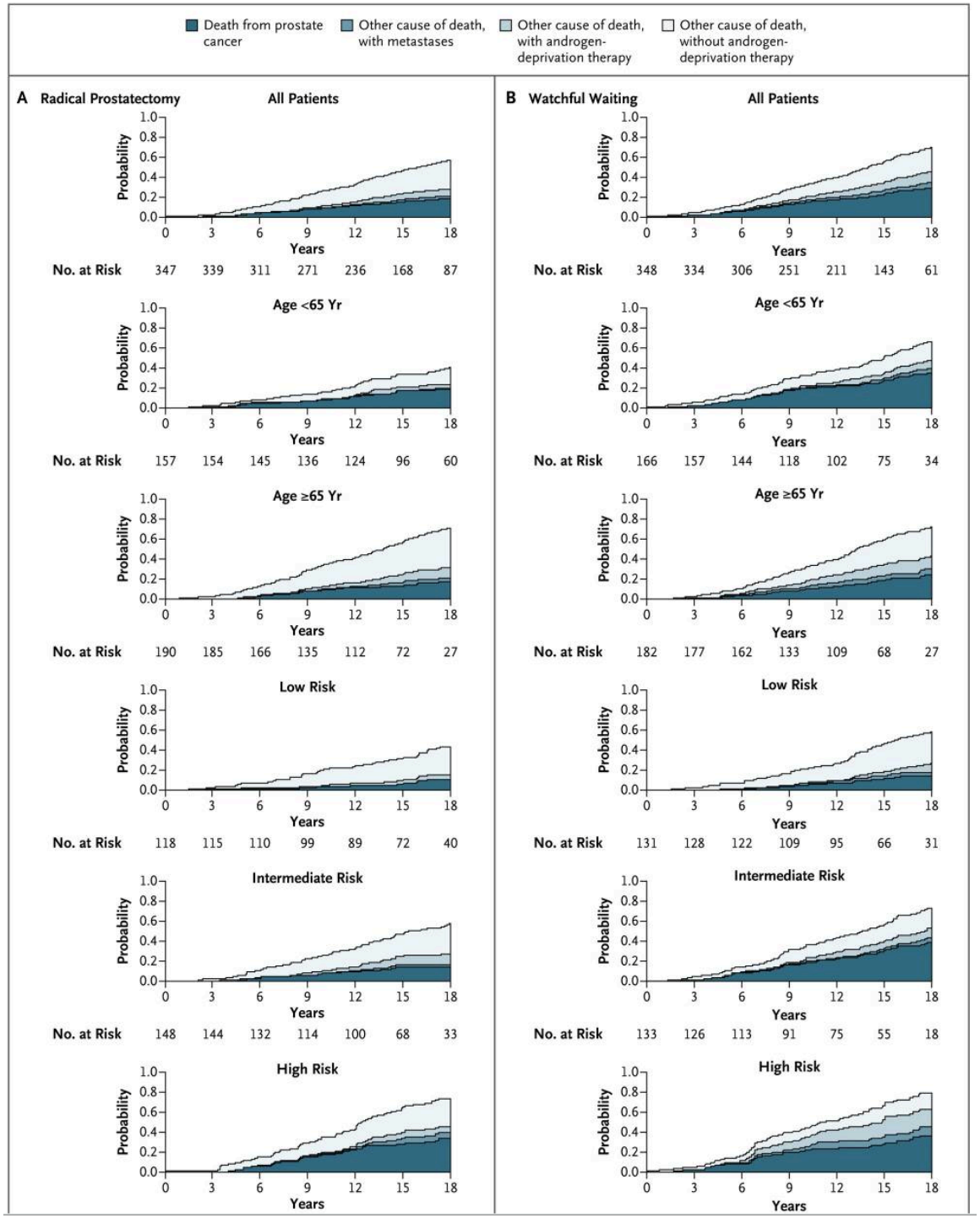
- Active surveillance for favorable-risk prostate cancer is feasible and seems safe in the 15-year time frame.
- In our cohort, 2.8% of patients have developed metastatic disease, and 1.5% have died of prostate cancer.
- This mortality rate is consistent with expected mortality in favorable-risk patients managed with initial definitive intervention.

Klotz L, et al: J Clin Oncol. 2015 Jan 20;33(3):272-7.

- In 26 cohorts included 7627 men, with a median follow-up of 3.5 yr (range of medians 1.5–7.5 yr), there were 8 prostate cancer deaths and 5 cases of metastases in 24 981 person-years of follow-up.
- Each year, 8.8% of men (95% confidence interval 6.7–11.0%) received radical treatment, most commonly because of biopsy findings, prostate-specific antigen triggers, or patient choice driven by anxiety.
- Studies in which most men changed treatment were those including only low-risk Gleason score 6 disease and scheduled rebiopsies.

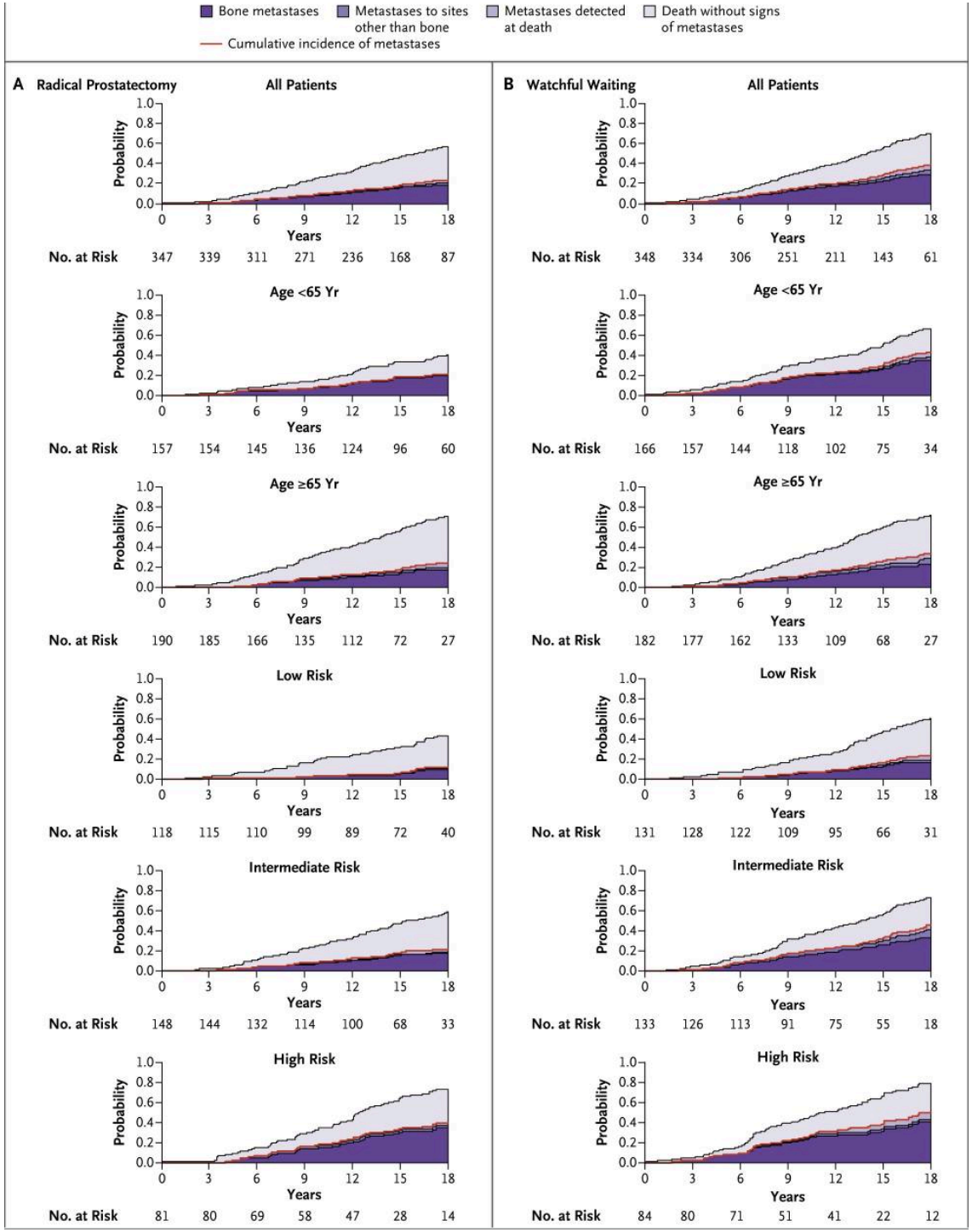
Simpkin, Aj, et al: Eur Urol; 67: 2015 DOI: 10.1016/j.eururo.2015.01.004

Ενεργητική παρακολούθηση: οι θάνατοι



Bill-Axelson A et al: N Engl J Med. 2014 Mar 6; 370(10): 932–942.

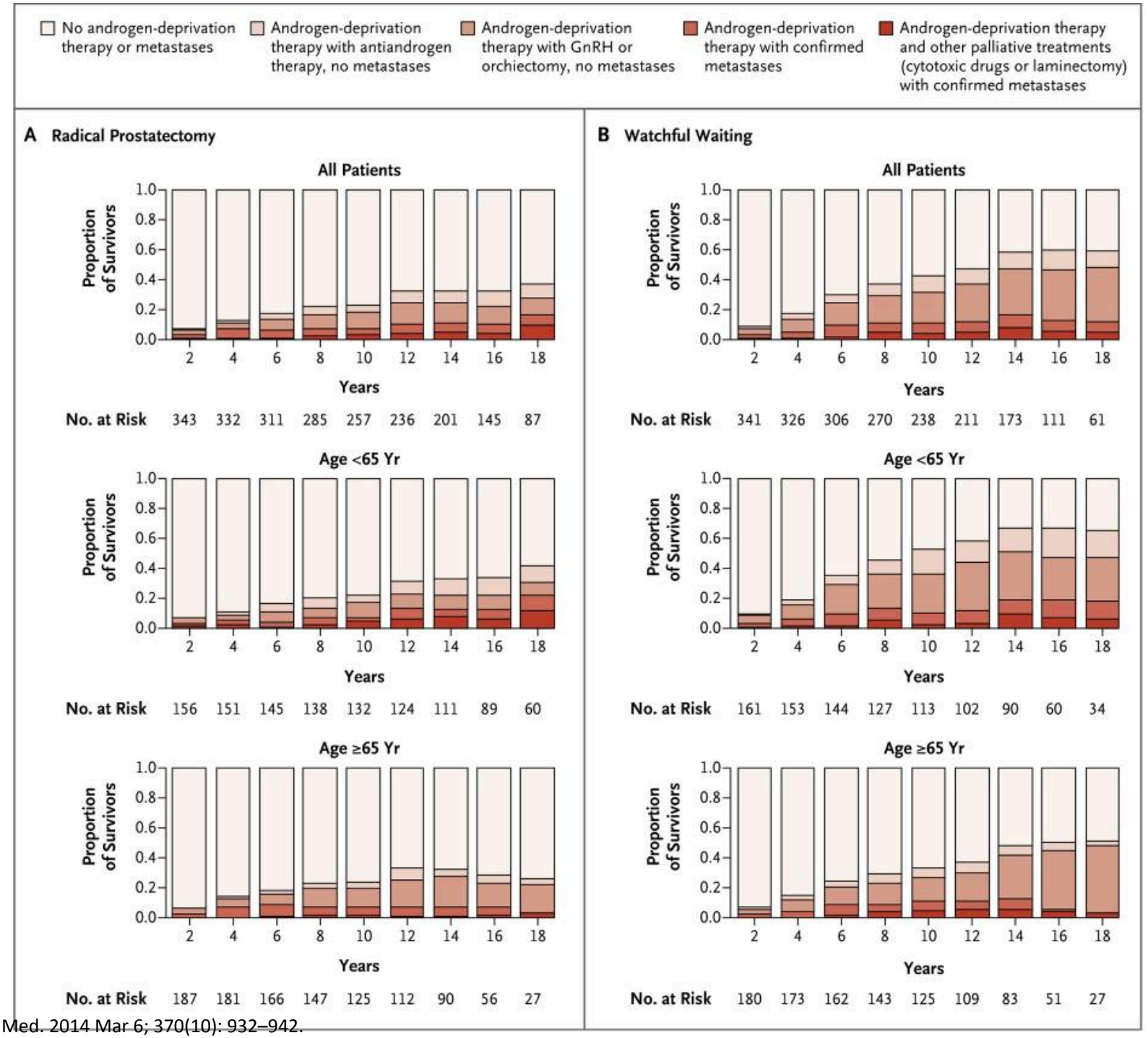
Ενεργητική παρακο-λούθηση



Bill-Axelson A et al: N Engl J Med. 2014 Mar 6; 370(10): 932–942.

ΕΠ

μεταστάσεις



Bill-Axelson A et al: N Engl J Med. 2014 Mar 6; 370(10): 932–942.

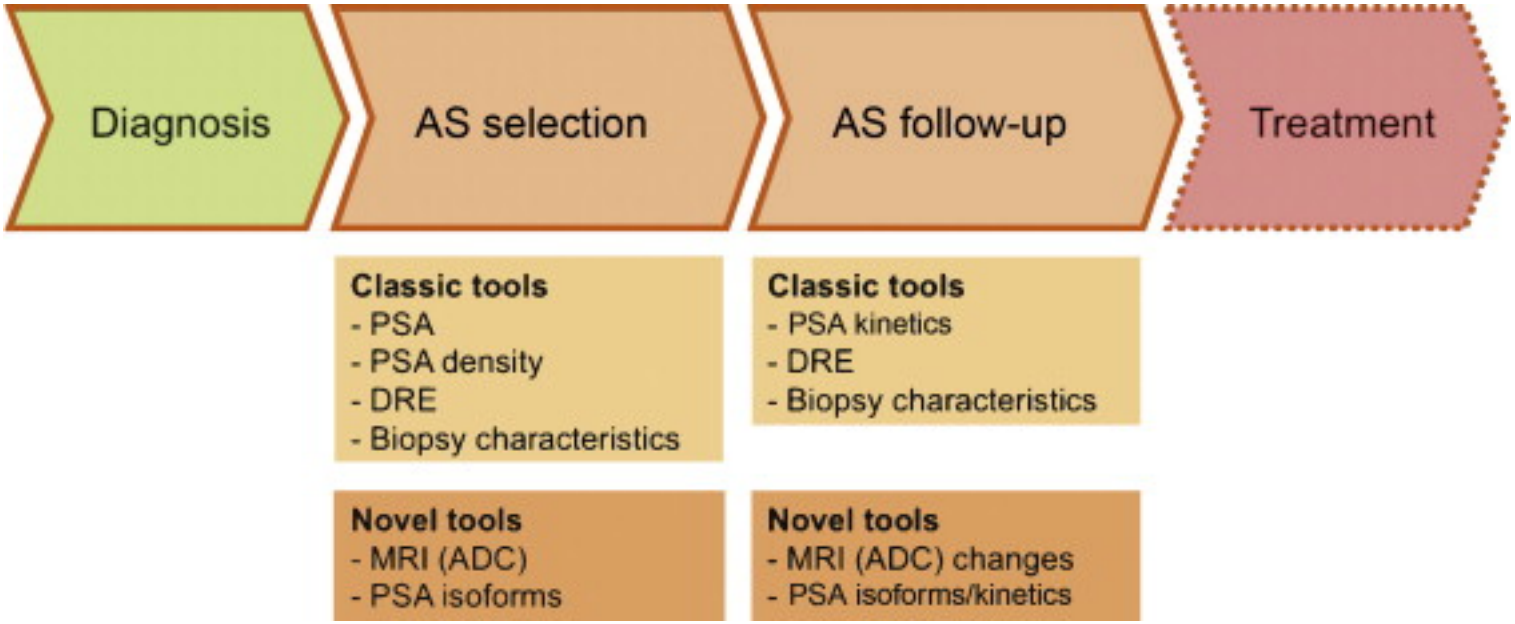
Ενεργής παρακολούθηση για 23 έτη

Treatment	Deaths	Pca deaths	Relative risk	N treated to prevent death
AS	247/348	99/348	0.77	-
Surgery	200/347	63/347	0.77	8

- The benefit of surgery with respect to death from prostate cancer was largest in:
- ✓ men younger than 65 years of age (relative risk, 0.45) and
- ✓ in those with intermediate-risk prostate cancer (relative risk, 0.38).
- Radical prostatectomy was associated with a reduced risk of metastases among older men (relative risk, 0.68; P = 0.04).

Bill-Axelson A et al: N Engl J Med. 2014 Mar 6; 370(10): 932–942.

Ενεργητική παρακολούθηση: οι νέοι δείκτες



van den Bergh, RCN et al: European Urology, 65 : 1023-1031, 2014

Υπέρ και κατά της ενεργητικής παρακολούθησης

Active Surveillance

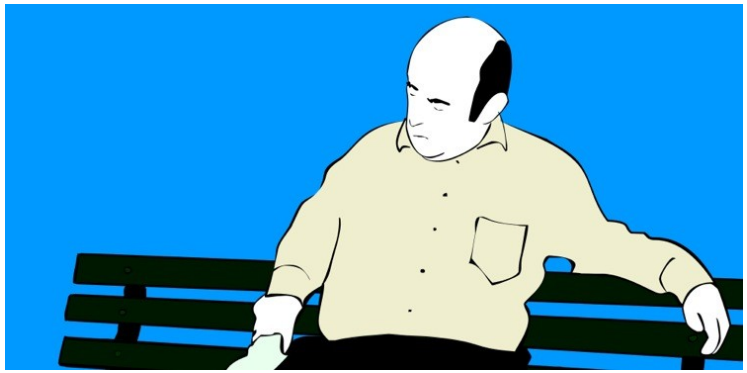
Pros

- Usually a good choice if expected to live <10 years and/or the prostate cancer is slow growing
- No down-time (besides doctor visits for tests)
- Avoid possible side effects of surgery, radiation or other treatments
- Medical advances may make future treatment more tolerable

Cons

- More likely to die from prostate cancer within 10 years vs. surgery[1]
- May miss the chance to treat the cancer before it spreads outside the prostate
- Regular biopsies can increase the likelihood of erectile dysfunction[2]
- May not tolerate treatment if wait until older
- More than 40% of prostate cancers are actually faster growing than graded[3]

1. Merglen A, et al. Arch Intern Med. 2007 Oct 8;167(18):1944-50 2. Helfand [illegible] 28. 3. Barqawi AB, et al. Int J Clin Exp Pathol. 2011 Jun 20;4(5):468-75.



Το περιστατικό (3α)

- Ο Γιώργος αποφασίζει να κάνει κατάψυξη σπέρματος (σπερμοδιάγραμμα 33M/ml, 44% (13a+31b) κινητικότητα την 1η ώρα, 7% φυσιολογικά). Δίνει 2 δείγματα, (χωρισμένα στα 3 το καθένα)
- Συγχρόνως αποφασίζει να κάνει προσπάθεια με παρακολούθηση της ωορρηξίας από γυναικολόγο για 1 μήνα. Συμπληρωματικά, κάνει και 1 σπερματέγχυση. Χωρίς αποτέλεσμα...

Η κατάψυξη σπέρματος απαραίτητη πριν την θεραπεία σε νέους άνδρες

Table 1. Patient demographics

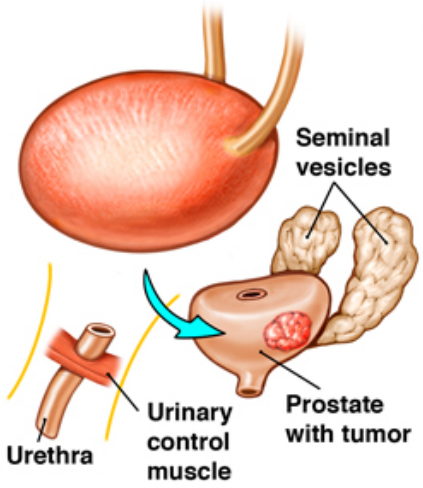
Characteristic	
Age (yr)	
Average	50.1
Range	42–58
Single (n)	2 (25)
Previous children (n)	5 (62.5)
PSA (ng/mL)	
Average	6.1
Range	3.2–7.5
Final pathologic Gleason score (n)	
2–5	0
6	1 (12.5)
7	6 (75)
8–10	0
Unknown	1 (12.5)
Radical prostatectomy (n)	8 (100)
Cryopreservation of semen (n)	8 (100)
Samples (n)	
Average	2.4
Range	1–4
Epididymal extraction (n)	1 (12.5)
Pregnancy attempt (n)	2 (25)

PSA = prostate-specific antigen.
Data in parentheses are percentages.

Knoester, PA, et al: Urology, 69 (2007), p. 123

Το περιστατικό (3β)

- Προβληματίζεται να κάνει βραχυθεραπεία που δεν βλάπτει το σπέρμα και την στύση ή ριζική προστατεκτομή
- Και αν κάνει επέμβαση, να κάνει ανοικτή ή κλειστή, λαπαροσκοπική ή ρομποτική;

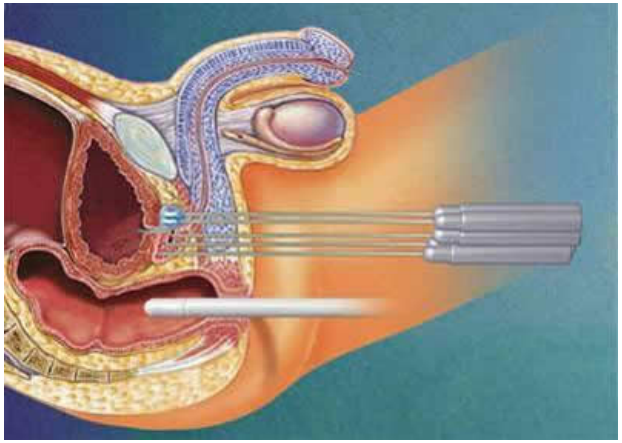


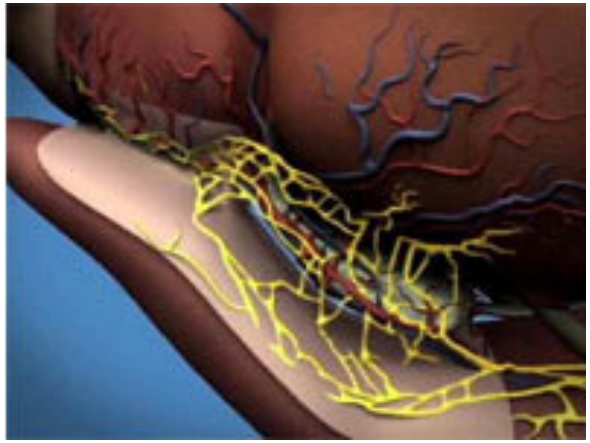
Ποια η καλύτερη θεραπεία για την σεξουαλική λειτουργία;

- Τι ενημέρωση θα κάνατε για τα θέματα σεξουαλικής λειτουργίας;

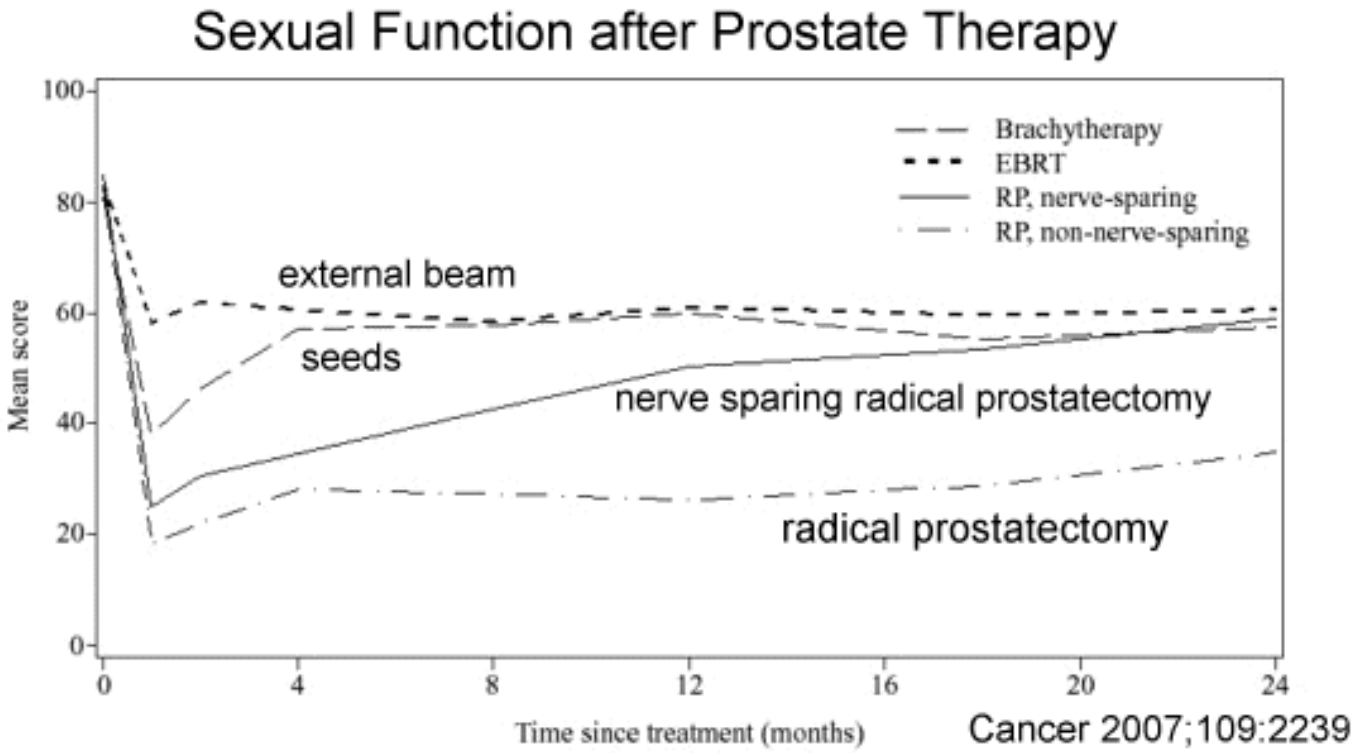
✓ Βραχυθεραπεία

✓ Ριζική προστατεκτομή





Στυτική λειτουργία μετά ριζική ή βραχυθεραπεία



Στυτική λειτουργία μετά ριζική ή βραχυθεραπεία

Crook J, et al: Comparison of health-related quality of life 5 years after SPIRIT: surgical prostatectomy versus interstitial radiation intervention trial. J Clin Oncol, 29 (2011), p. 362

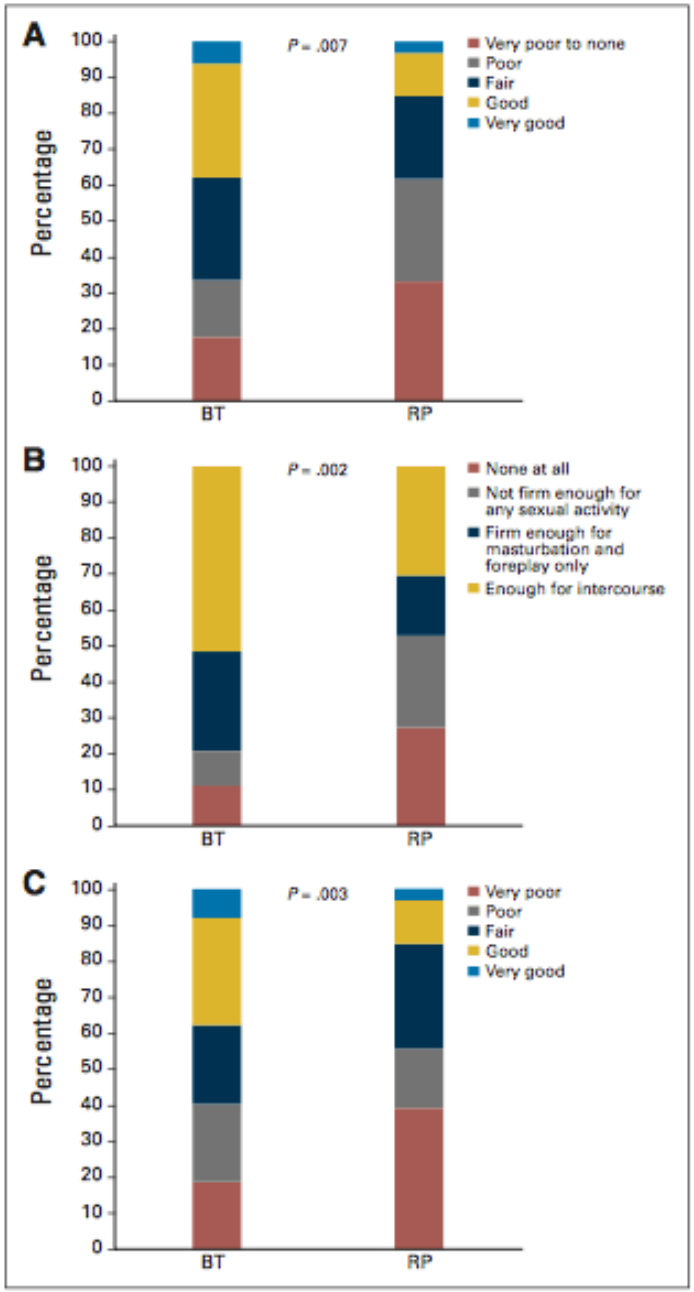


Fig 2. Stacked bar charts on three selected questions from the Expanded Prostate Cancer Index Composite sexual domain illustrating patient responses for the two interventions concerning (A) the ability to have an erection, (B) the quality of erections, and (C) the ability to function sexually. BT, brachytherapy; RP, radical prostatectomy.

Παράγοντες που επηρεάζουν την σεξουαλική λειτουργία

Table 3.

Factors determining potency recovery according to Cox regression analysis

Variables	Univariate			Multivariate		
	HR	95% CI	*p* value	HR	95% CI	*p* value
Age, yr	0.933	0.916–0.949	<0.001	0.941	0.922–0.960	<0.001
OP method, RARP vs RRP)	2.539	1.789–3.602	<0.001	1.998	1.345–2.968	0.001
Testosterone, ng/ml	1.100	1.029–1.175	0.005	1.098	1.013–1.190	0.023
Positive biopsy cores, No.	0.924	0.875–0.976	0.005	0.952	0.893–1.015	0.129
Pathologic T stage (≥T3 vs T2)	0.687	0.520–0.907	0.008	0.813	0.593–1.114	0.198
PSA, ng/ml	0.986	0.973–1.000	0.049	0.994	0.980–1.008	0.409
D'Amico risk group, high vs non	0.906	0.687–1.197	0.488	1.364	0.974–1.909	0.071
Body mass index, kg/m^2	0.968	0.927–1.012	0.150	1.002	0.956–1.050	0.938
Membranous urethral length, cm	0.775	0.499–1.203	0.255	0.807	0.492–1.322	0.395

HR = hazard ratio; CI = confidence interval; OP = operating; RARP = robot-assisted radical prostatectomy; RRP = retropubic radical prostatectomy; PSA = prostate-specific antigen.

Seong Cheol Kim , Cheryn Song , Wansuk Kim , Taejin Kang , Jinsung Park , In Gab Jeong , Sangmi Lee , Yong Mee C...

Factors Determining Functional Outcomes After Radical Prostatectomy: Robot-Assisted Versus Retropubic

European Urology, Volume 60, Issue 3, 2011, 413 - 419

Ο ρόλος της εμπειρίας του χειρουργού

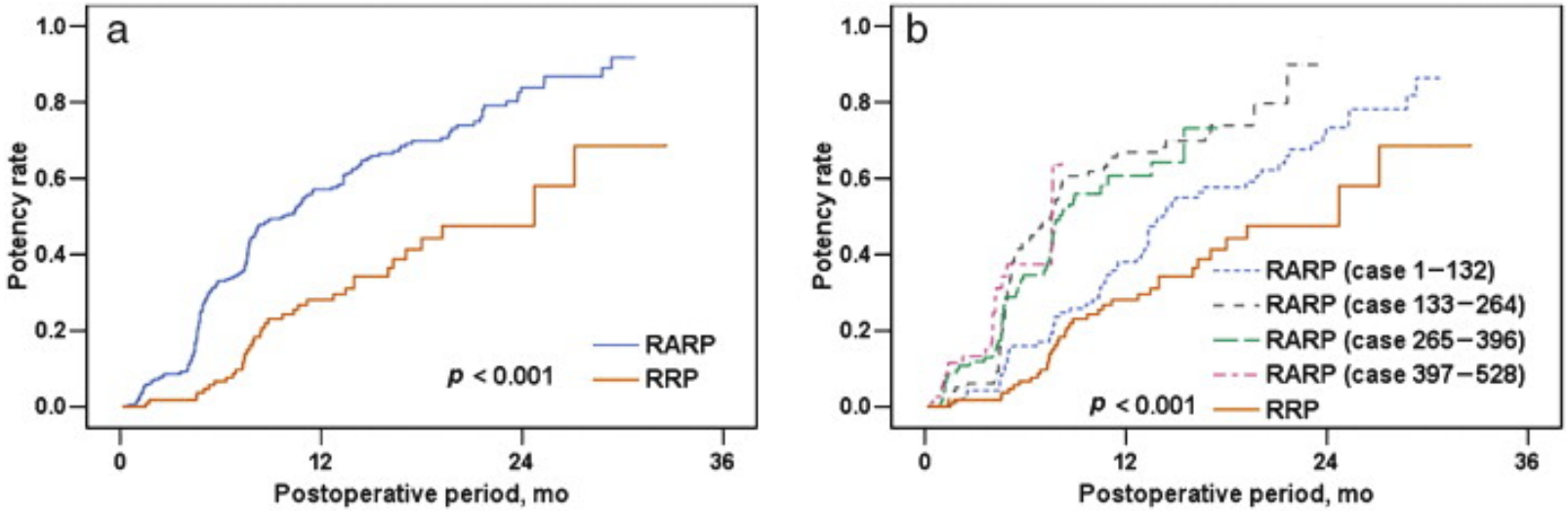


Fig. 2 Kaplan-Meier analysis of the relationship between the recovery of potency and surgical method (robot-assisted radical prostatectomy [RARP] vs retropubic radical prostatectomy [RRP]): (a) overall and (b) subgroups according to operation period.

Seong Cheol Kim , Cheryn Song , Wansuk Kim , Taejin Kang , Jinsung Park , In Gab Jeong , Sangmi Lee , Yong Mee C...

Factors Determining Functional Outcomes After Radical Prostatectomy: Robot-Assisted Versus Retropubic

European Urology, Volume 60, Issue 3, 2011, 413 - 419

http://dx.doi.org/10.1016/j.eururo.2011.05.011

Το ρομπότ θα κερδίσει;

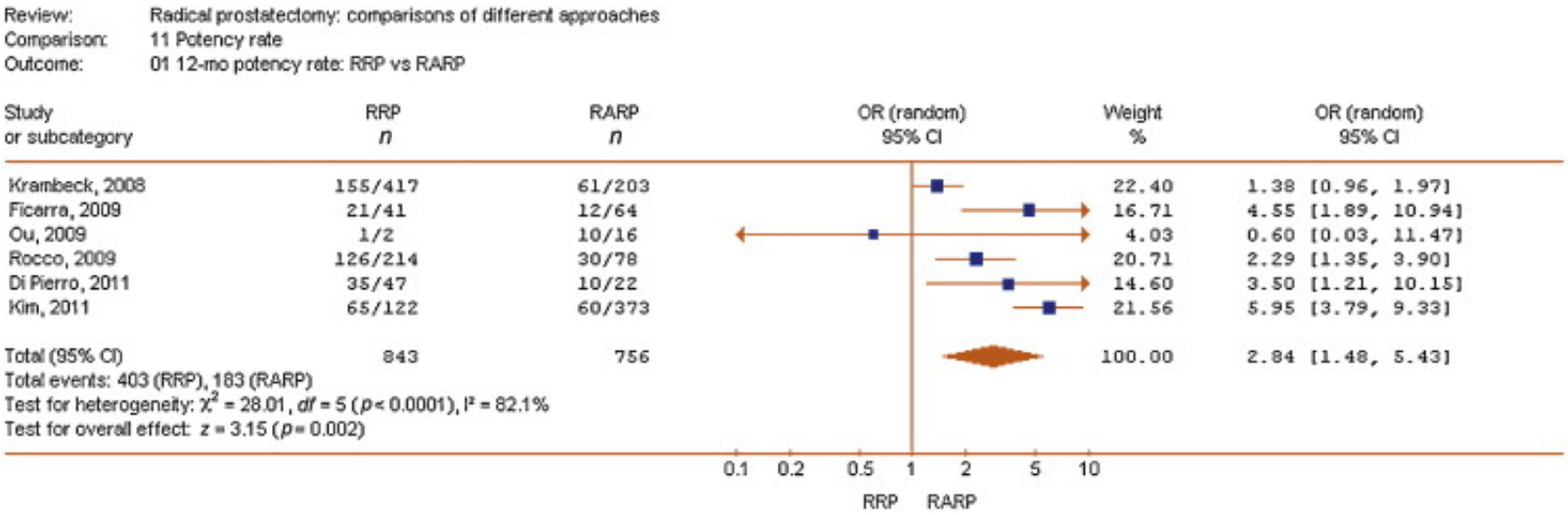


Fig. 2 Cumulative analyses of 12-mo potency rates following robot-assisted radical prostatectomy or retropubic radical prostatectomy. CI = confidence interval; OR = odds ratio; RARP = robot-assisted radical prostatectomy; RRP = retropubic radical prostatec...

Vincenzo Ficarra , Giacomo Novara , Thomas E. Ahlering , Anthony Costello , James A. Eastham , Markus Graefen , Gi...

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

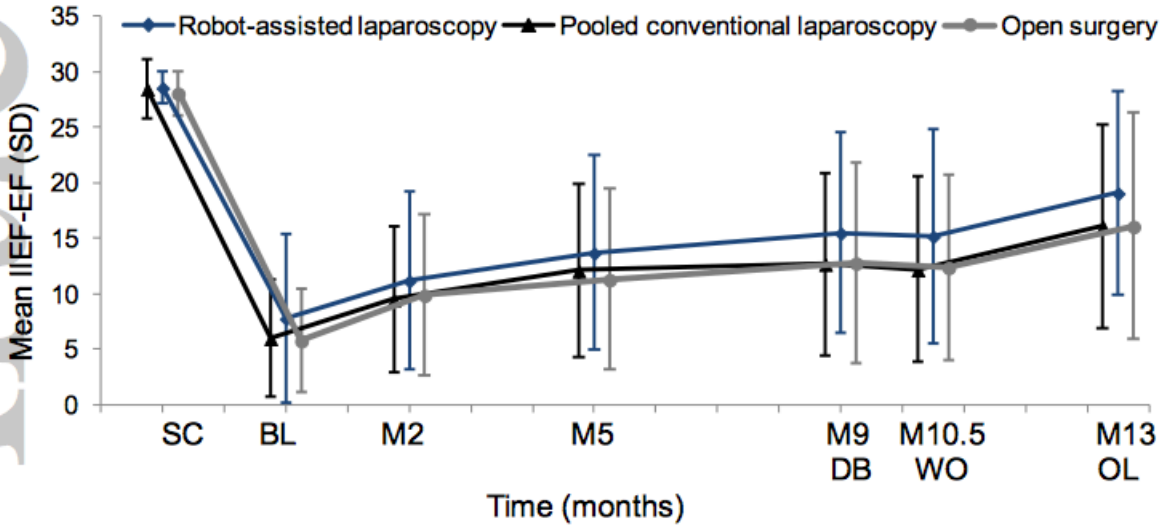
European Urology, Volume 62, Issue 3, 2012, 418 - 430

http://dx.doi.org/10.1016/j.eururo.2012.05.046

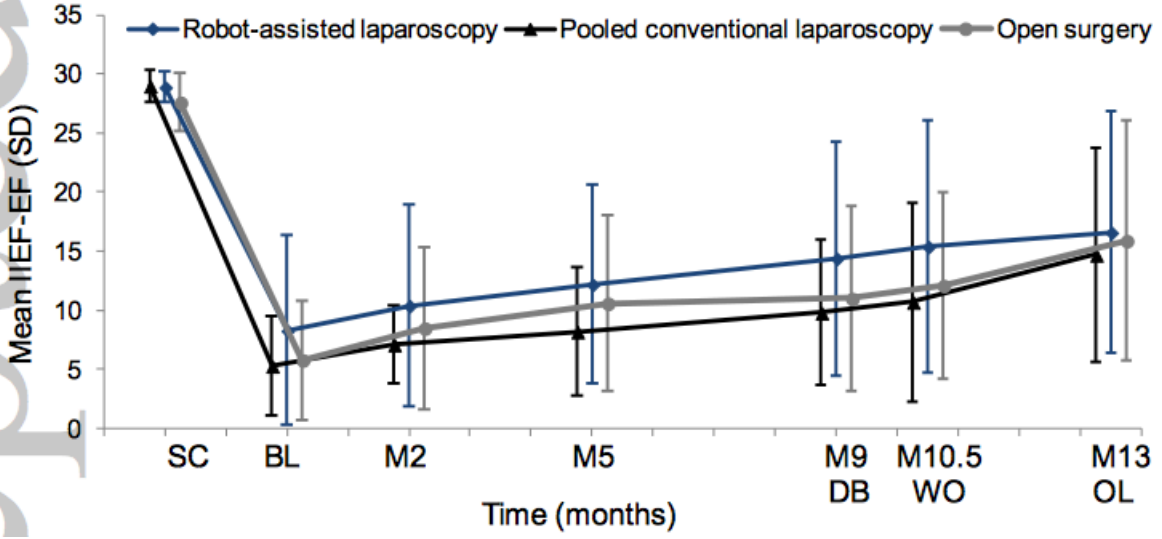
Ποια μέθοδος τελικά προστατεύει την στυτική λειτουργία;

Figure 4 – Mean (SD) IIEF-EF scores over time by surgical approach across all treatment groups (a) and the placebo group only (b), ITT population (N=422)

a) All patients



b) Placebo group only



Stolzenburg JU, et al: BJU Int. 2015 in press

Τι βλάπτει η ριζική προστατεκτομή περισσότερο;

1. την επιθυμία
2. την στύση
3. την εκσπερμάτιση
4. τον οργασμό
5. το μήκος του πέους

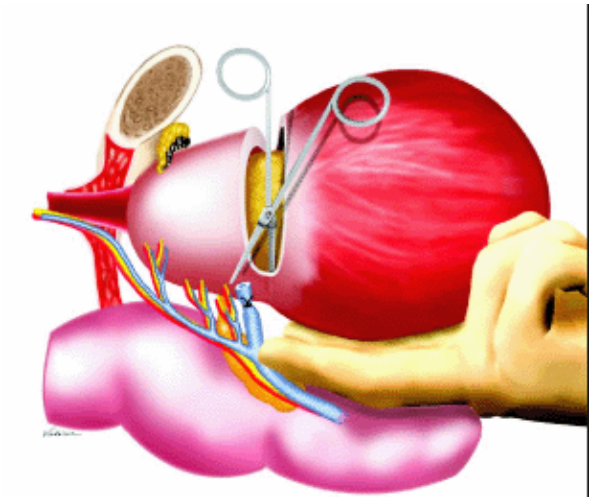
Ποιες επιπλοκές ξεχνάμε;

- Systematic review of 43 articles were included.
- Orgasm-associated incontinence: 20–93% (daytime incontinence, previous TURP)
- Alterations of orgasmic function: 80% (erectile dysfunction) seems to play an important role in waning orgasmic function.
- Orgasm-associated pain: 3% -19% (Sparing of the tips of the seminal).
- Penile shortening: 15–68%.

Frey AU, Sønksen J, Fode M. **Neglected side effects after radical prostatectomy: a systematic review.** J Sex Med. 2014 Feb;11(2):374-85

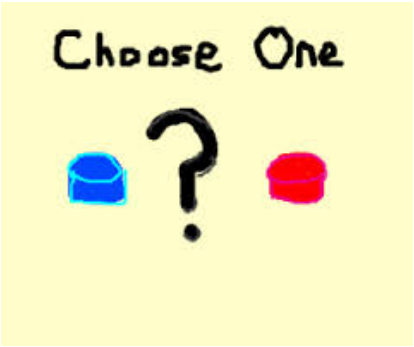
Πόσο συχνά γίνεται στην πράξη διατήρηση των νευραγγειακών δεματίων;

1. 14%
2. 19%
3. 26%
4. 54%
5. 67%



Από τι εξαρτάται η στυτική λειτουργία και εγκράτεια μετά την επέμβαση;

1. Από την διατήρηση των νευραγγειακών δεματίων
2. Από τη αποφυγή χρήσης διαθερμίας
3. Από την εμπειρία του χειρουργού
4. Από την ηλικία του
5. Από την στυτική του λειτουργία και εγκράτεια προεγχειριτικά
6. Από όλα τα παραπάνω



The role of the neurovascular bundle

- Patrick Walsh in the early 1980s showed that the nerves mediating penile erection pass outside of the prostate, mainly in the two neurovascular bundles.
- The role of the bundles in acting on the external urethral sphincter remains unclear.
- The bundles may provide blood supply or structural support to the external sphincter, although this has not been proven anatomically.
- Autonomic nerve fibers in the bundles may innervate the striated urethral sphincter or pass through the sphincter to innervate the smooth muscle sphincter component of the membranous urethra.
- Many dispute, however, the idea that autonomic nerves, in the bundles or outside of them, innervate the specialized striated and slow-twitch muscle sphincter, which may function primarily to maintain passive continence when a person is not urinating.

Steineck G, et al, LAPRO steering committee. Eur Urol, 67:559-568, 2015

The LAPRO study

- Surgical steps that differ between procedures, but that can be documented in a standardized way, can be studied as predictors of long-term outcomes.
- To gain knowledge for refining the technique, more than 100 surgeons, working within a framework of prospective data collection at 14 centers, documented the procedure during radical prostatectomy using the same protocol.
- To increase validity, a neutral third party, administratively separated from all clinical centers and working scientifically only, prospectively collected patient-reported outcomes.
- Based on the collected data, we asked whether preservation of the neurovascular bundles, or other surgical steps, predicts the rate of urinary incontinence 1 yr after surgery.
- The LAPPRO (LAParoscopic Prostatectomy Robot Open) study recruited from 14 centers, 7 centers performing robot-assisted laparoscopic radical prostatectomy and 7 centers performing open retropubic radical prostatectomy.
- A neutral study secretariat collected patient-reported data before surgery as well as 3, 12, and 24 mo after surgery.
- In addition, we gathered clinical record forms concerning the situation before surgery, then on the surgical steps taken during surgery, and finally on clinical characteristics during follow-ups at 1.5–3 mo after surgery and again at 12 and 24 mo after surgery.

Steineck G, et al, LAPRO steering committee. Eur Urol, 67:559-568, 2015

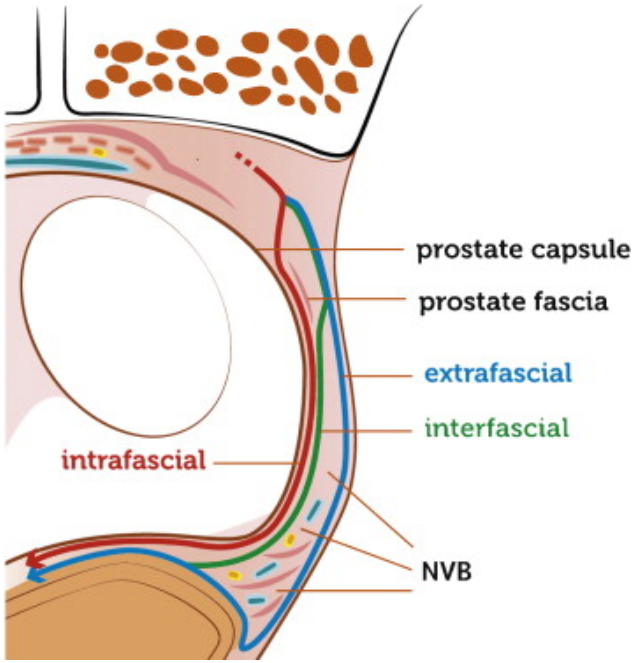
Operative characteristics	
Total skin-to-skin operation time (min)	
Median (range)	163 (21–545)
IQR	123–205
Not stated (*n*)	498
Nerve-sparing surgery, *n* (%)	
No neurovascular dissection	716 (21)
Uni- or bilateral partial dissection	430 (13)
Unilateral inter- or intrafascial dissection	611 (18)
Bilateral, partial dissection on one of the sides	541 (16)
Bilateral interfascial dissection	681 (20)
One side interfascial, one side intrafascial dissection	157 (5)
Bilateral intrafascial dissection	197 (6)
Not stated	5 (<1)
Lymph-gland excision, *n* (%)	
Not done	2787 (84)
Limited	251 (8)
Extended	281 (8)
Not stated	6 (<1)
Surgical margin, *n* (%)	
Negative	2585 (78)
Positive	662 (20)
Not stated	67 (2)
Perioperative bleeding (ml)	
Median (range)	175 (0–8000)
IQR	100–400
Not stated (*n*)	233

The LAPRO study n=3379

Steineck G, et al, LAPRO steering committee. Eur Urol, 67:559-568, 2015

The LAPRO study: question to surgeons

- ➢ “Which approach was used during the neurovascular dissection?”
- ✓ “No nerve-sparing procedure was carried out, the neurovascular bundle was resected”; “In the fascia (intrafascial)”;
- ✓ “Outside of the fascia (interfascial)”;
- ✓ “Semi-nerve sparing (further out from the prostate)”



Intrafascial dissection on both sides	21/184 (11)
Intrafascial dissection on one side, interfascial on the other side	17/145 (12)
Interfascial dissection on both sides	95/641 (15)
Dissection on both sides, partial on one side	93/504 (18)
Dissection on one side only, inter- or intrafascial dissection	130/564 (23)
Partial dissection on one or both sides	113/395 (29)
No neurovascular dissection	216/673 (32)

Steineck G, et al, LAPRO steering committee. Eur Urol, 67:559-568, 2015

The LAPRO study: questions to surgeons

- ➢ "How high was the release of the neurovascular bundle?"
- ✓ "Not applicable"
- ✓ "High (veil of Aphrodite)"
- ✓ "Moderately high"
- ✓ "Low"

Level of release of the neurovascular bundles[a]	
High on one or both sides	99/706 (14)
Moderately high on one or both sides	239/1228 (19)
Low on one or both sides	130/493 (26)

Steineck G, et al, LAPRO steering committee. Eur Urol, 67:559-568, 2015

The LAPRO study: surgical steps n=3379

Resection of the seminal vesicles	
Complete, both sides	429/1923 (22)
Complete, one side only	76/288 (26)
Partial resection	196/937 (21)
Cautery laterally to the seminal vesicles	
Not done	393/2089 (19)
On one side	116/445 (26)
On both sides	163/536 (30)

Resection of the urinary bladder neck	
No	410/1933 (21)
Resection without tennis	144/615 (23)
Resection with tennis	128/547 (23)

Cautery near the urethra	
No	611/2861 (21)
Yes	60/204 (29)

Bipolar cautery[a]	
No	416/2204 (19)
On one side	45/182 (25)
On both sides	9/52 (17)

Type of anastomosis	
Continuous sutures	521/2377 (22)
Single sutures	164/726 (23)
Presence of a cutting suture in the urethra	
No	635/2934 (22)
Yes	33/130 (25)
Presence of a cutting suture in the bladder neck	
No	639/2983 (21)
Yes	27/75 (36)

Steineck G, et al, LAPRO steering committee. Eur Urol, 67:559-568, 2015

The LAPRO study: questions to patients 1 year after

- "How many times do you change pad, diaper, or other sanitary protection during a typical 24 hours?".
- ✓ "Not applicable, I do not use a pad, diaper, or sanitary protection"
- ✓ "More seldom than once per 24 h"
- ✓ "About once per 24 h"
- ✓ "About two to three times per 24 h"
- ✓ "About four to five times per 24 h"
- ✓ "About six times or more per 24 h".

Steineck G, et al, LAPRO steering committee. Eur Urol, 67:559-568, 2015

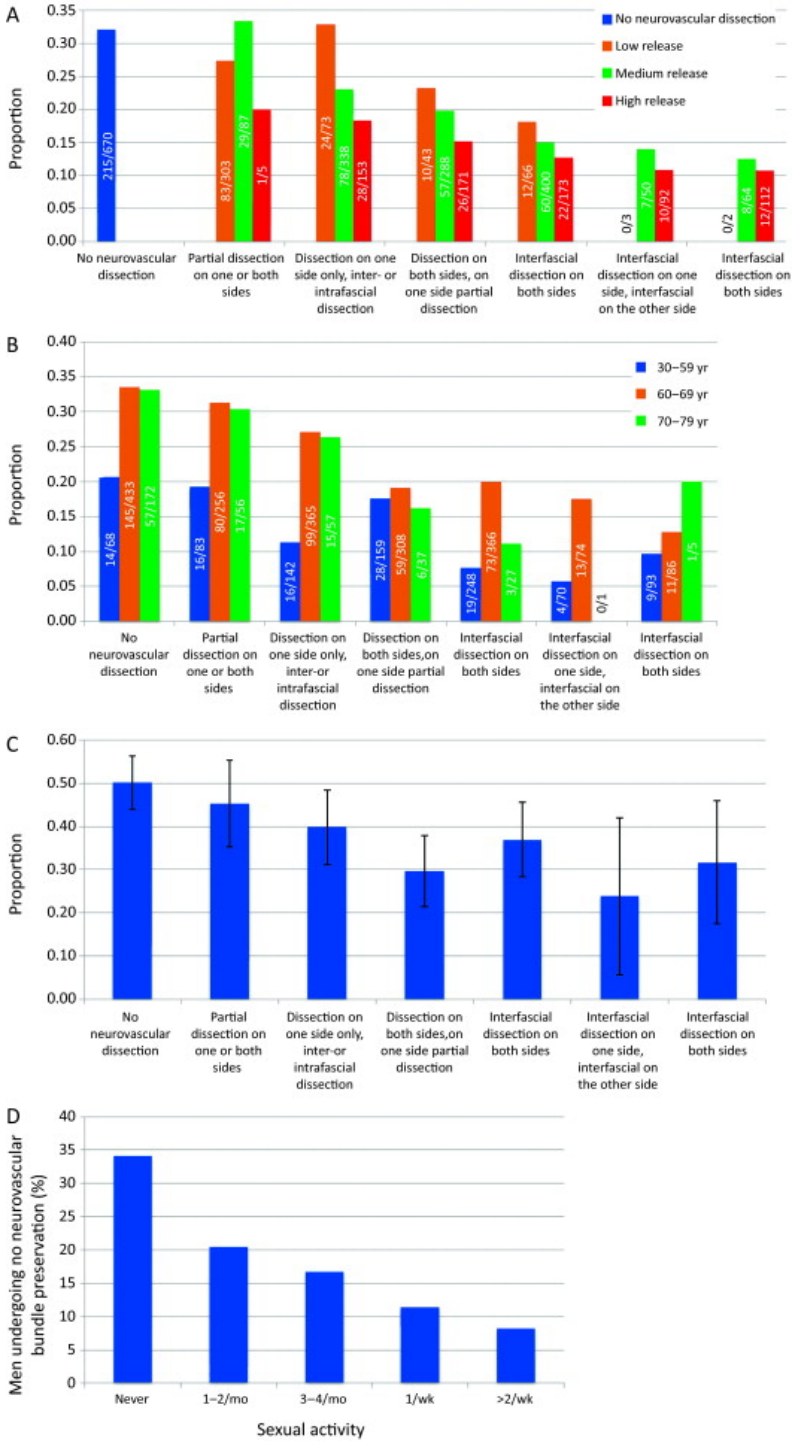
The LAPRO study: the degree of preservation of the two neurovascular bundles during radical prostatectomy predicts the rate of urinary incontinence

(A) Prevalence of urinary incontinence at 1 yr in relation to the degree of preservation of the neurovascular bundles and low, medium or high release of at least one of the two neurovascular bundles.

(B) Prevalence of urinary incontinence at 1 yr in relation to the degree of bundle preservation for three different age groups.

((C) Prevalence of urinary incontinence at 1 yr in relation to the degree of preservation of the neurovascular bundles among men classified as having erectile dysfunction before surgery. The error bars show the 95% confidence interval.

(D) Percentage of men undergoing no preservation of any neurovascular bundle according to sexual activity before surgery. We asked before surgery “How often did you have intercourse during the previous month?”. Answering categories were “Never”, “About 1–2 times the previous month”, “About 3–4 times the previous month”, “About one time per week”, “More than two times per week”. For each category we show the percentage receiving no preservation of any neurovascular bundle.



Steineck G, et al, LAPRO steering committee. Eur Urol, 67:559-568, 2015

EUROPEAN UROLOGY 62 (2012) 365–367

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

European Association of Urology

Platinum Priority – Editorial

Referring to the articles published on pp. 368–452 of this issue

Robot-assisted Radical Prostatectomy – Fake Innovation or the Real Deal?

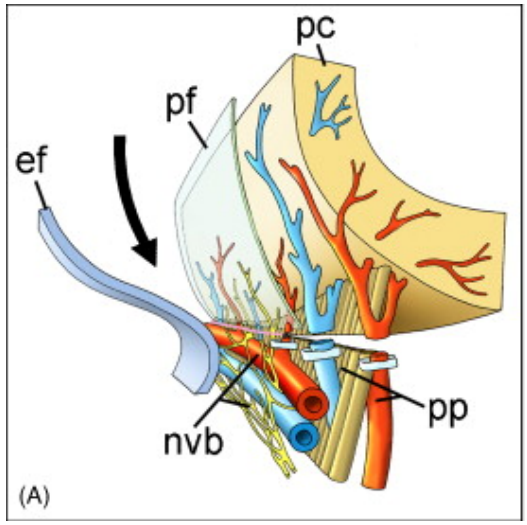
Peter C. Albertsen *

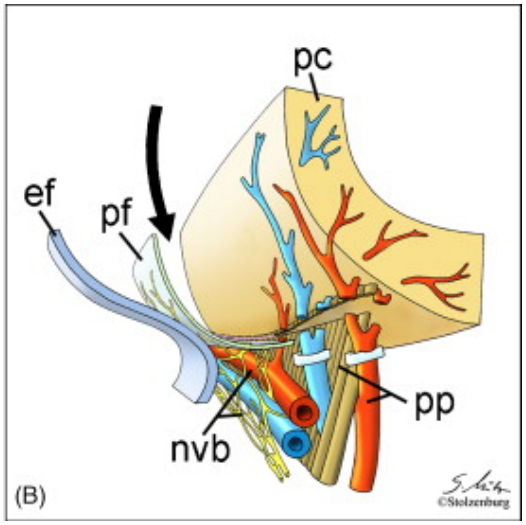
University of Connecticut Health Center, Division of Urology, MC 3955, 263 Farmington Avenue, Farmington, CT 06030-3955, USA

"Only when individual patients are willing to pay the added expense of new innovations with their own money will we know if the robot is a ''fake innovation'' or the real deal".

Το περιστατικό (4)

- Ο Γιώργος αποφασίζει να κάνει λαπαροσκοπική ριζική προστατεκτομή, με διατήρηση των αγγειονευρωδών δεματίων αμφοτερόπλευρα.
- Η επέμβαση δεν είχε επιπλοκές, ο καθετήρας αφαιρείται την 4^{η} ημέρα και είναι πλήρως εγκρατής.

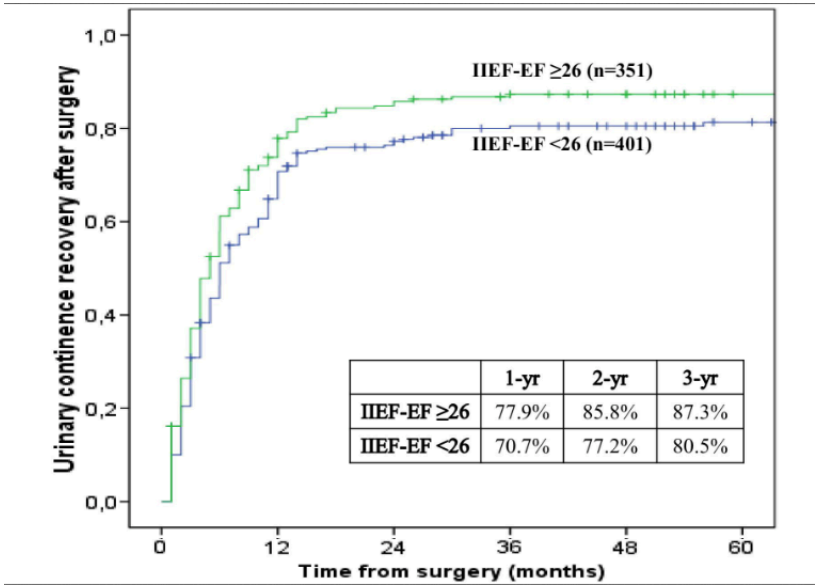




Η μετεγχειρητική εγκράτεια είναι καλός οιωνός για τη στύση;

1. Σίγουρα
2. Καλύτερα από την ακράτεια
3. Δεν παίζει ρόλο

Η μετεγχειρητική εγκράτεια είναι καλός οιωνός για τη στύση;



	1-yr	2-yr	3-yr
IIEF-EF ≥26	77.9%	85.8%	87.3%
IIEF-EF <26	70.7%	77.2%	80.5%

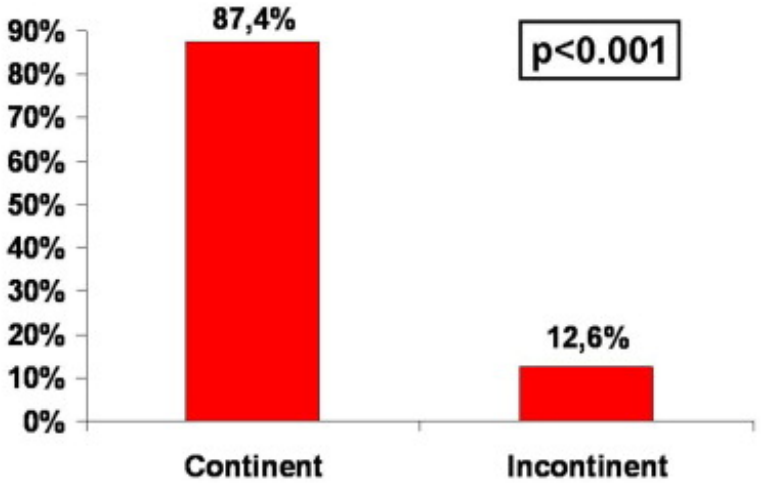


Figure 5.

EF recovery rate after BNSRP, defined as IIEF-EF 22 or greater, by UC after BNSRP.

J Urol. 2012 Feb;187(2):569-74. doi: 10.1016/j.juro.2011.10.034. Epub 2011 Dec 15.

Preoperative erectile function represents a significant predictor of postoperative urinary continence recovery in patients treated with bilateral nerve sparing radical prostatectomy.

Gandaglia G[1], Suardi N, Gallina A, Capitanio U, Abdollah F, Salonia A, Nava L, Colombo R, Guazzoni G, Rigatti P, Montorsi F, Briganti A.

Το περιστατικό (5)

- Ενα μήνα μετά την επέμβαση ο Γιώργος, -με σύσταση του χειρουργού του-, ξεκινά λήψη βαρδεναφίλης ODT, 2 φορές την εβδομάδα πριν την κατάκλιση.
- Στους 2 μήνες αναφέρει διόγκωση πλήρη, αλλά όχι σκληρότητα του πέους ικανή για διείσδυση. Επίσης, αναφέρει και 2-3 επεισόδια πρωινών στύσεων μικρής διάρκειας μετά νυκτερινή λήψη φαρμάκου.

Ποιές είναι οι επιπτώσεις στην ψυχολογία απο την στυτική δυσλειτουργία;

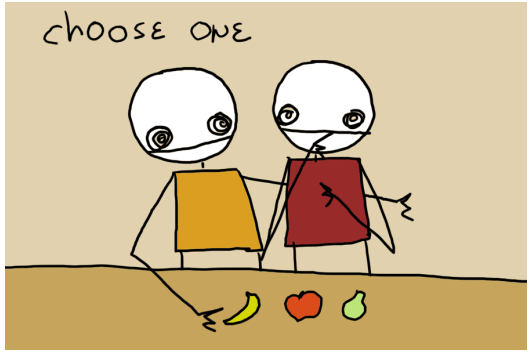
Six primary themes emerged:

(1) frustration with the lack of information about postsurgery ED;
(2) negative emotional impact of ED and avoidance of sexual situations;
(3) negative emotional experience with penile injections and barriers leading to avoidance;
(4) the benefit of focusing on the long-term advantage of ER versus short-term anxiety;
(5) using humor to help cope; and
(6) the benefit of support from partners and peers.

Nelson CJ, et al: Psychooncology. 2015 Feb 24. doi: 10.1002/pon.3771

Πότε ξεκινά η θεραπεία με PDE5i;

1. τις πρώτες 2-3 μετεγχειρητικές ημέρες
2. στις 15 ημέρες
3. μόλις κλείσει μήνα
4. Μόλις βγει ο καθετήρας



Πότε ξεκινά η θεραπεία με PDE5i;

TABLE 1. *Percentage of erections sufficient for penetration (grade 3 or 4) at different intervals after radical retropubic prostatectomy*

Mos. Postop.	No. Pts.	No. Erection Grade 3 (%)
1	17	14 (82.3)
2–3	19	12 (63.0)
4–6	14	8 (57.0)
7–12	23	8 (34.7)

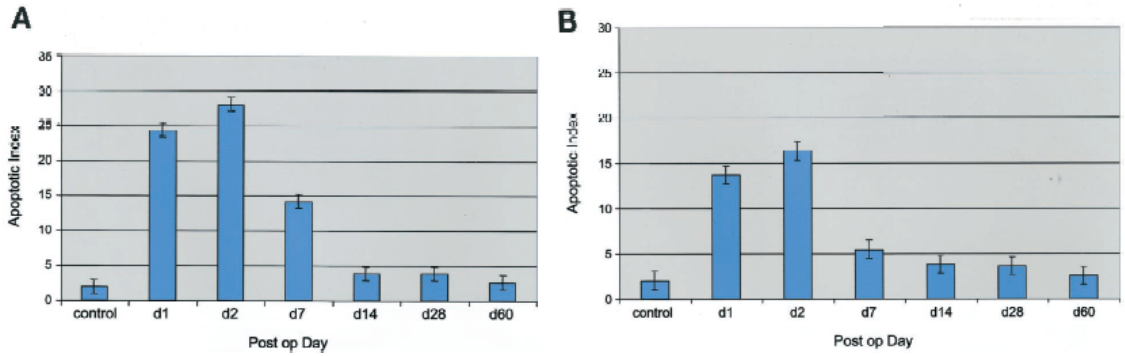
P. Gontero, et al: J Urol, 169 (2003), pp. 2166–2169

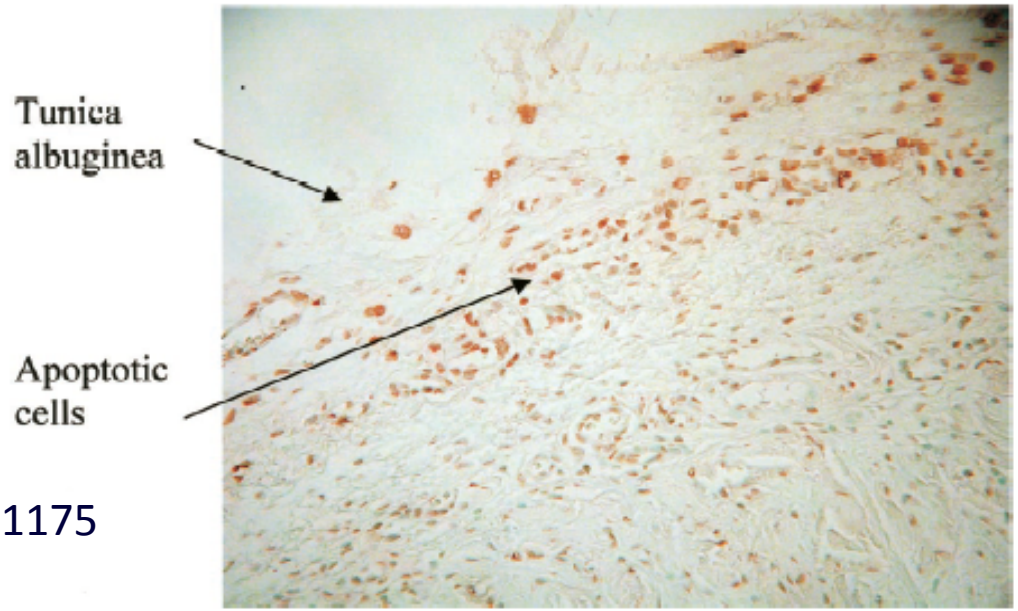
Τι μας δείχνει η πορεία του Γιώργου;

- Η παρουσία διόγκωσης προδικάζει τη διατήρηση των νεύρων;
- Οι πρωινές στύσεις γιατί είναι καλύτερες σε σκληρότητα απο τις ερωτικές;
- Γιατί δεν διαρκούν;
- Άργησε να ξεκινήσει θεραπεία για τη στύση;

Τι συμβαίνει στο πέος μετά την ριζική προαστατεκτομή;

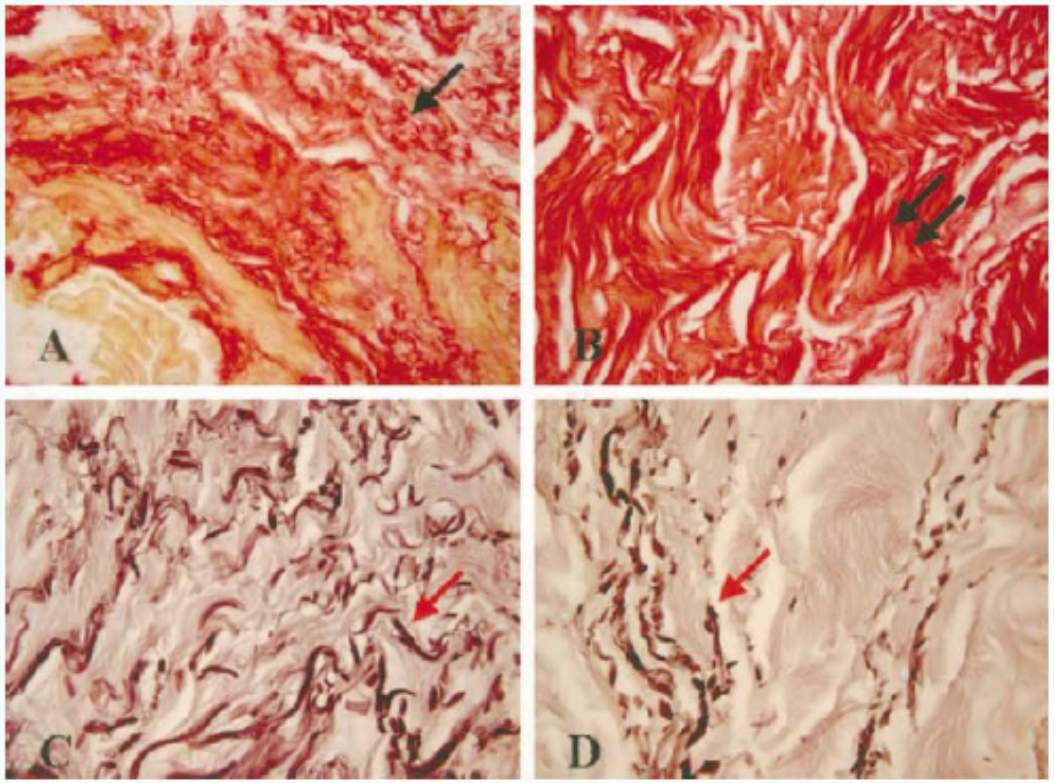
Percent of Apoptotic Cells





User et al, J Urol 2003;169:1175

Τι συμβαίνει στο πέος μετά την ριζική προαστατεκτομή;

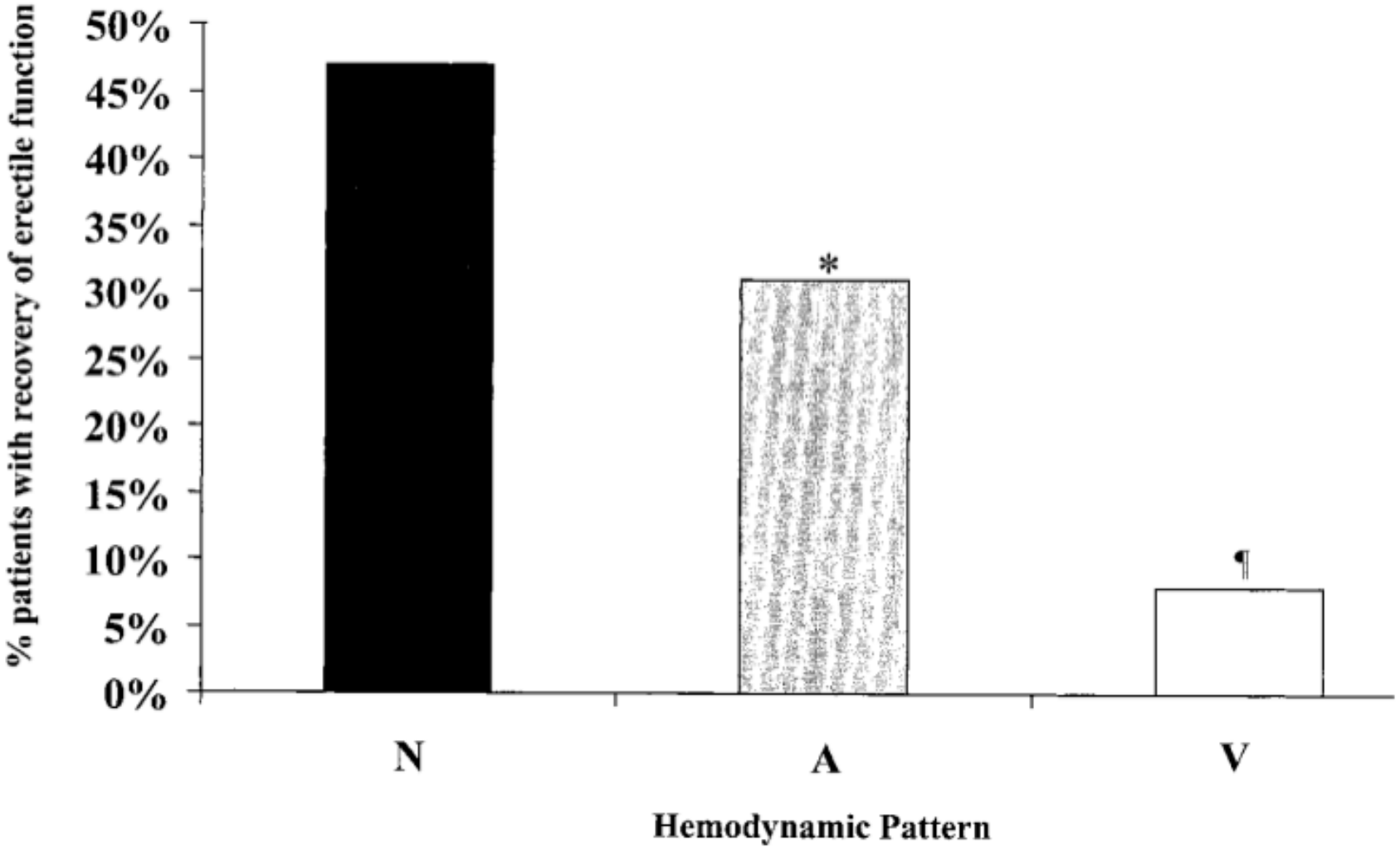


Black arrow :
trabecular collagen fibers

Red arrow :
trabecular elastic fibers

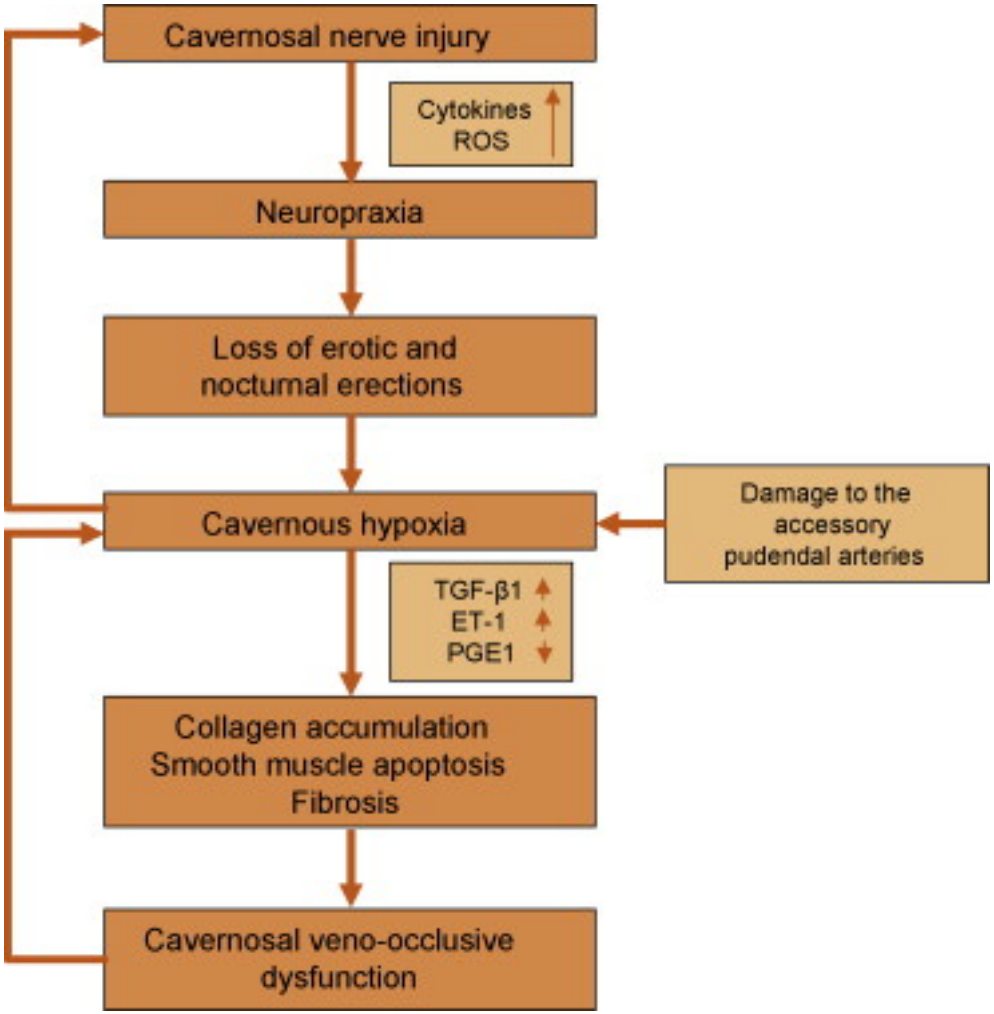
Iacono F, et al. J Urol 2005;173:1673-6

Τι συμβαίνει στο πέος μετά την ριζική προαστατεκτομή;



Mulhall, J, et al: J Urol, 167 (2002), pp. 1371–1375

Τι συμβαίνει στο πέος μετά την ριζική προαστατεκτομή;



Hatzimouratidis K et al: Eur Urol; 55:334-347, 2009

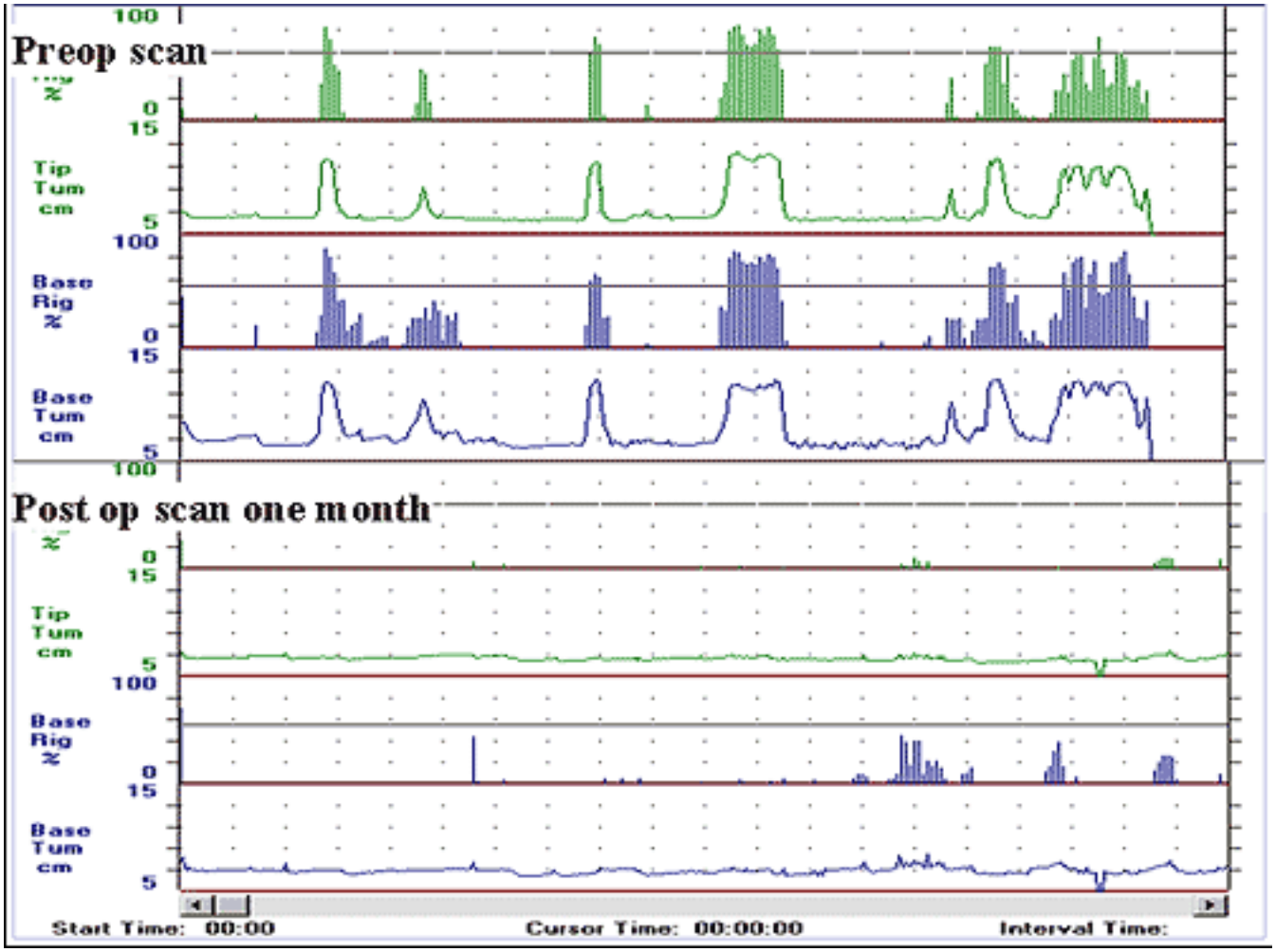
Table 2 Basic scientific data on the role of phosphodiesterase type 5 inhibitors (PDE5-Is) in the cavernous nerve injury animal model (rats).

Study	PDE5-I	Dosage	Functional results	Structural results
Ferrini et al [20]	Vardenafil	30mg/l of drinking water for 45 d	Normalized the dynamic infusion cavernosometry drop rate	Increased iNOS; increased smooth muscle replication; normalized ratio of smooth muscle to collagen; no effect in apoptotic index
Vignozzi et al [66]	Tadalafil	2mg/kg per day in drinking water for 3 mo	NA	Normalized ETB expression; almost normalized ratio of smooth muscle to collagen; absence of hypoxyprobe labeling in smooth muscle cells; did not rescue the neurectomy-induced hypoexpression of nNOS and eNOS
Ferrini et al [65]	Sildenafil	20mg/kg per day in drinking water for 45 d	Normalized the dynamic infusion cavernosometry drop rate	Improved ratio of smooth muscle to collagen; reduced apoptotic index
Lagoda et al [24]	Sildenafil	20mg/kg every 8h SC for 7 d	Improved ICP/MAP ratios Improved ICP (AUC)	Increased GPX levels; decreased NT levels
Kovanecz et al [21]	Sildenafil	20mg/kg per day in drinking water for 45 d	Normalized dynamic infusion cavernosometry	Normalized ratio of smooth muscle to collagen; increased smooth muscle replication; normalized apoptotic index
Kovanecz et al [54]	Tadalafil	5mg/kg per day retrolingually for 45 d	Normalized the low response to papaverine Normalized the dynamic infusion cavernosometry drop rate	Normalized ratio of smooth muscle to collagen; normalized smooth muscle replication; reduced apoptotic index
Mulhall et al [64]	Sildenafil	20mg/kg per day SC for 28 d	Improved ICP/MAP ratios	Protected ratio of smooth muscle to collagen; preservation of CD31 and eNOS expression; reduced apoptotic index
Lysiak et al [67]	Tadalafil	1.3g/day for 20 d via oral gavage	NA	Decreased apoptotic cells; increased Akt and extracellular signal-regulated kinase 1/2

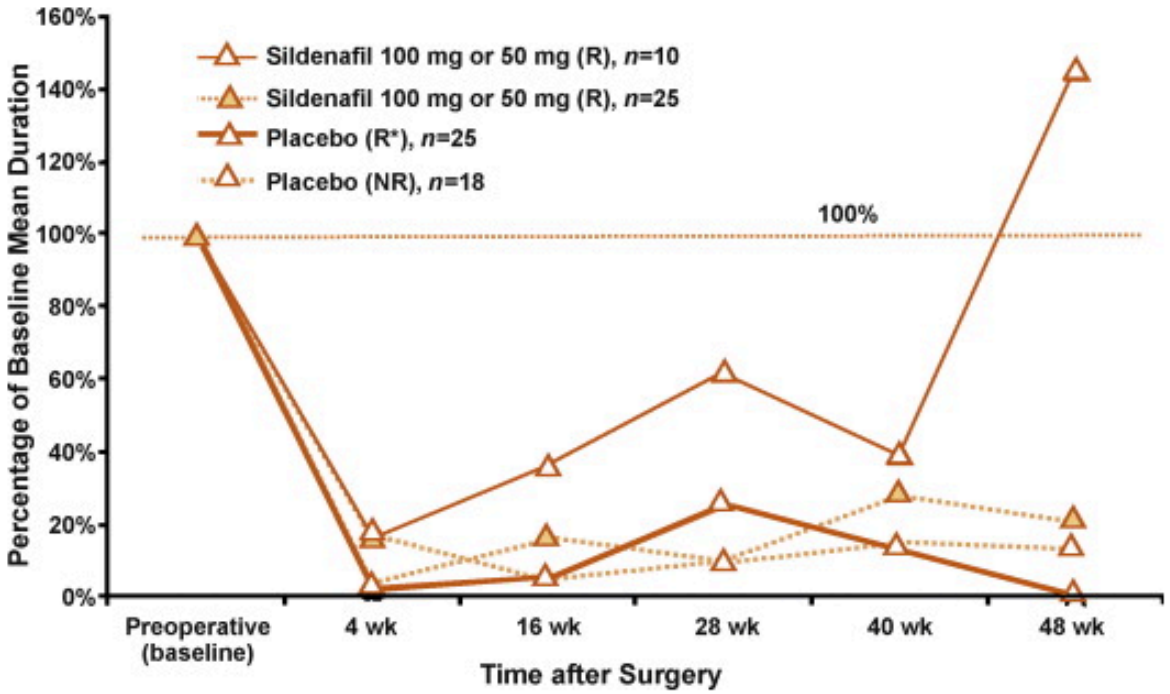
Πως δρουν τα φάρμακα στο σηραγγώδες νεύρο;

Hatzimouratidis K et al: Eur Urol; 55:334-347, 2009

Πως δρουν τα φάρμακα στις νυκτερινές στύσεις;

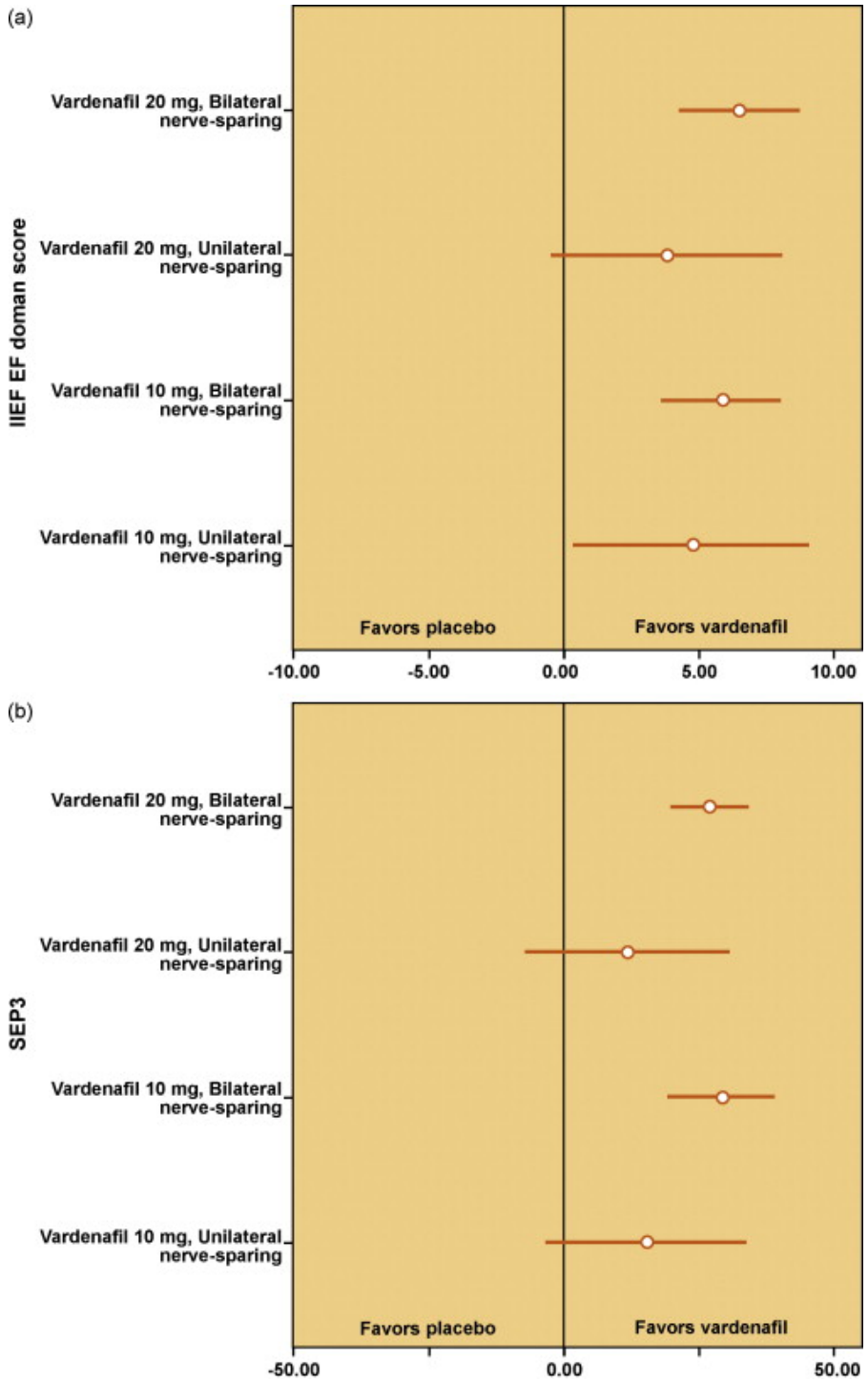


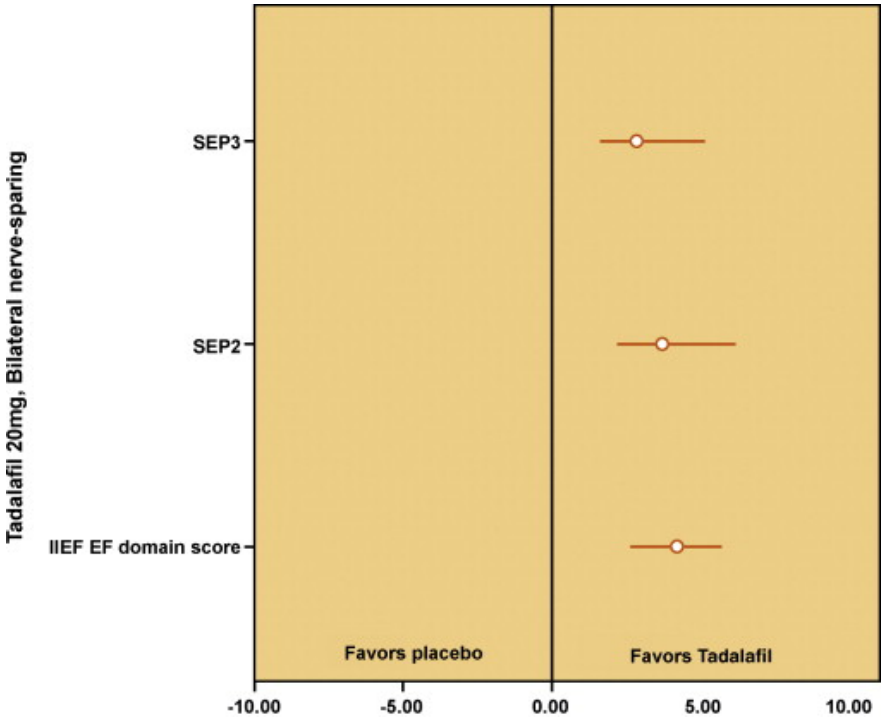
Πως δρουν τα φάρμακα στις νυκτερινές στύσεις;



McCullough AR et al: *J Sex Med. 2008;5:476-484*

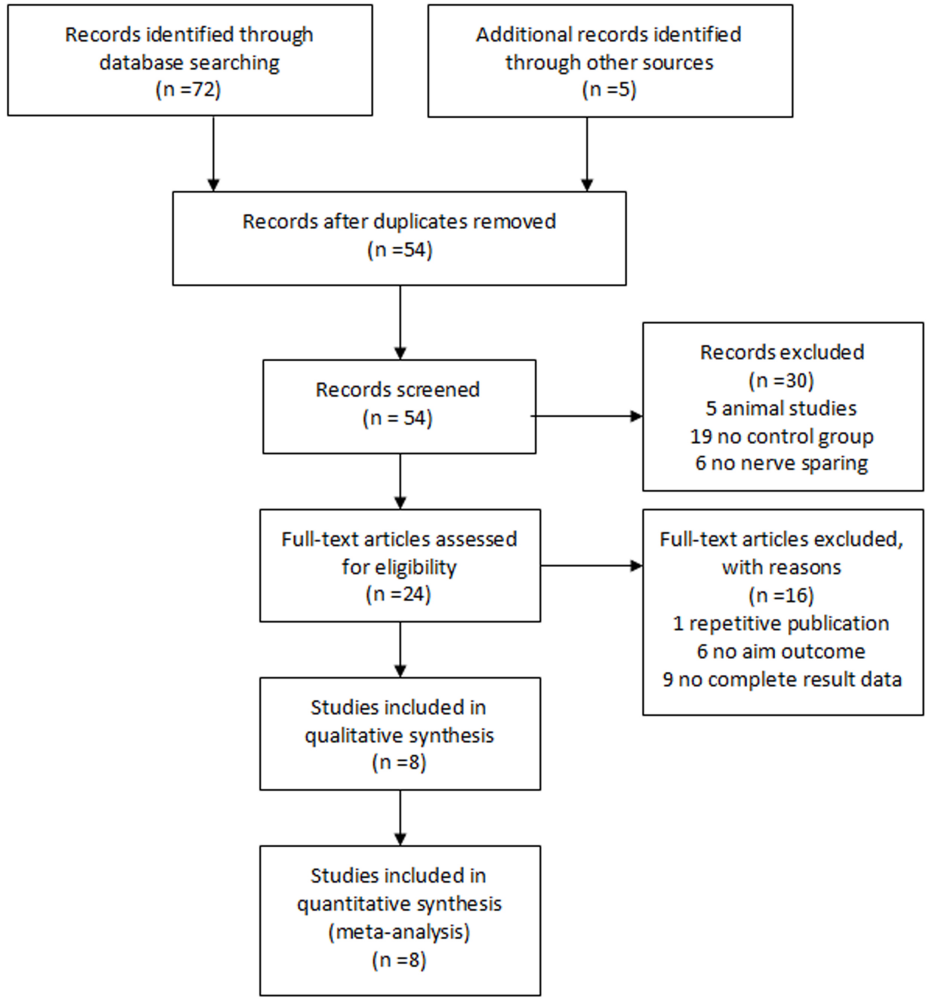
Βοηθούν οι PDE5i;





Hatzimouratidis K et al: Eur Urol; 55:334-347, 2009

Systematic Review and Meta-Analysis of the Use of Phosphodiesterase Type 5 Inhibitors for Treatment of Erectile Dysfunction following Bilateral Nerve-Sparing Radical Prostatectomy



Wang X, Wang X, Liu T, He Q, Wang Y, et al. (2014) Systematic Review and Meta-Analysis of the Use of Phosphodiesterase Type 5 Inhibitors for Treatment of Erectile Dysfunction following Bilateral Nerve-Sparing Radical Prostatectomy. PLoS ONE 9(3): e91327. doi:10.1371/journal.pone.0091327

Systematic Review and Meta-Analysis of the Use of Phosphodiesterase Type 5 Inhibitors for Treatment of Erectile Dysfunction following Bilateral Nerve-Sparing Radical Prostatectomy

Study ID	Country	Sample size	Inclusion criteria	Intervention	Control	Treatment period	Outcome	Adverse event
Montorsi et al 2008	Multicentre across Europe, USA, Canada and South Africa	628	Patients scheduling to undergo BNSRRP	(i) vardenafil 10 mg nightly plus on-demand placebo (ii) flexible-dose vardenafil on-demand plus nightly placebo	nightly placebo plus on-demand placebo	9 months	rate of IIEF score ?22 and SEP-3 success rate	Included
Aydogdu et al 2011	Turkey	85	Patients scheduling to undergo BNSRRP	tadalafil 20 mg/day	no use of tadalafil	6 months	IIEF score, SEP-2 success rate, SEP-3 success rate and penile measurements	N/A
Padma-Nathan et al 2008	Multicentre across North America and France	125	Patients scheduling to undergo BNSRRP	sildenafil 50 mg or 100 mg nightly	placebo nightly	9 months	rate of responders, IIEF score and the duration of penile tumescence and rigidity	Included
Brock et al 2003	Multicentre across USA and Canada	440	Patients with ED 6 months to 5 years after NSRRP	vardenafil 10 mg or 20 mg on-demand	placebo on-demand	3 months	IIEF score, SEP-2 success rate, SEP-3 success rate and GAQ success rate	Included
Montorsi et al 2004	Multicentre across Canada, Germany, Italy, Netherlands, Spain, USA and UK	303	Patients with ED 12 months to 48 months after NSRRP	tadalafil 20 mg on-demand	placebo on-demand	3 months	IIEF score, SEP-2 success rate, SEP-3 success rate, GAQ success rate and EDITS score	Included
Mulhall et al 2012	USA	298	Patients with ED 6 months or more after NSRRP	avanafil 10 mg or 20 mg on-demand	placebo on-demand	3 months	SEP-3 success rate, GAQ success rate	Included
Bannowsky et al 2008	USA	43	Patients scheduling to undergo BNSRRP	sildenafil 25 mg nightly	no use of PDE-5 inhibitors	13 months	IIEF score and SEP-3 success rate	N/A
Cavallini et al 2005	Italy	96	Patients with ED 6 months or more after NSRRP	(i) ALC+PLC+sildenafil 100 mg on demand (ii) sildenafil 100 mg on-demand	placebo on-demand	4 months	IIEF score and parameters of cavernosal arteries	Included

doi:10.1371/journal.pone.0091327.t001

Systematic Review and Meta-Analysis of the Use of Phosphodiesterase Type 5 Inhibitors for Treatment of Erectile Dysfunction following Bilateral Nerve-Sparing Radical Prostatectomy

Study ID	Adequate sequence generation?	Allocation concealment?	Blinding?	Incomplete outcome data addressed?	Free of selective reporting?	Free of other bias?
Montorsi et al 2008	Y	U	Y	N	N	Y
Aydogdu et al 2011	U	U	U	N	Y	Y
Padma-Nathan et al 2008	Y	U	Y	Y	Y	Y
Brock et al 2003	Y	U	Y	Y	Y	Y
Montorsi et al 2004	Y	U	Y	Y	Y	Y
Mulhall et al 2012	U	U	Y	Y	Y	Y
Bannowsky et al 2008	N	U	U	N	Y	Y
Cavallini et al 2005	U	Y	Y	Y	Y	Y

Review authors' judgments about each risk of bias item for included study. Y = yes; N = no; U = unclear.
doi:10.1371/journal.pone.0091327.t002

Wang X, Wang X, Liu T, He Q, Wang Y, et al. (2014) Systematic Review and Meta-Analysis of the Use of Phosphodiesterase Type 5 Inhibitors for Treatment of Erectile Dysfunction following Bilateral Nerve-Sparing Radical Prostatectomy. PLoS ONE 9(3): e91327. doi:10.1371/journal.pone.0091327

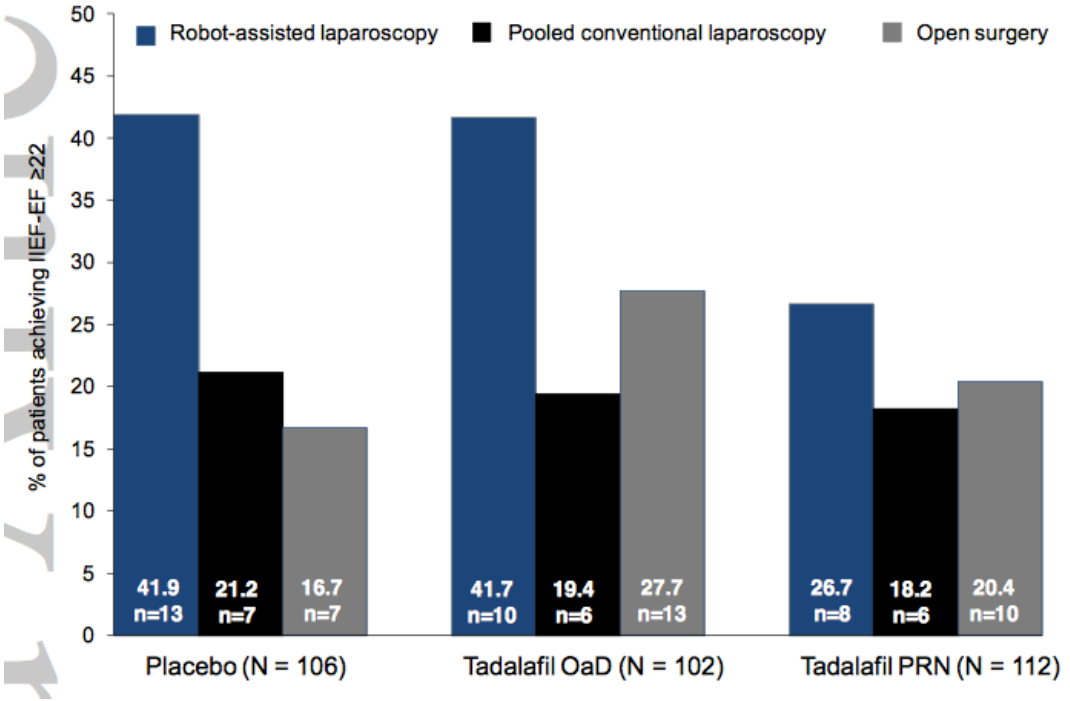
Systematic Review and Meta-Analysis of the Use of Phosphodiesterase Type 5 Inhibitors for Treatment of Erectile Dysfunction following Bilateral Nerve-Sparing Radical Prostatectomy

- PDE5-Is were effective for treating post-BNSRP ED compared to placebo when erectile function was determined using:
- ✓ IIEF score [mean difference (MD) 5.63, 95% confidence interval (CI) (4.26–6.99)],
- ✓ SEP-2 [relative risk (RR) 1.63, 95% CI (1.18–2.25)],
- ✓ SEP-3 [RR 2.00, 95% CI (1.27–3.15)] and
- ✓ GAQ [RR 3.35, 95% CI (2.68–4.67)].
- The subgroup analysis could find a trend associated with more responsiveness to PDE5-Is:
- ✓ longer treatment duration,
- ✓ higher dosage,
- ✓ on-demand dosing,
- ✓ sildenafil,
- ✓ mild ED.

Wang X, Wang X, Liu T, He Q, Wang Y, et al. (2014) Systematic Review and Meta-Analysis of the Use of Phosphodiesterase Type 5 Inhibitors for Treatment of Erectile Dysfunction following Bilateral Nerve-Sparing Radical Prostatectomy. PLoS ONE 9(3): e91327. doi:10.1371/journal.pone.0091327

Βοηθούν εξίσου τα φάρμακα, ανεξάρτητα απο τύπο επέμβασης;

Figure 3 – Patients achieving IIEF-EF ≥22 at the end of washout (Month 10.5) by treatment group, patients completing the washout period, ITT population (N=422)



Stolzenburg JU, et al: BJU Int. 2015 in press

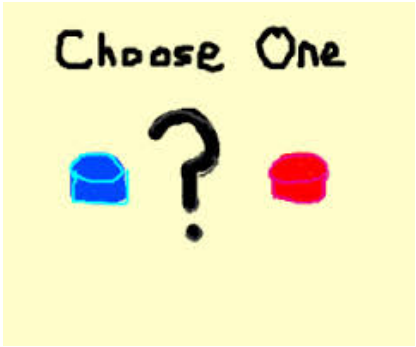
Σύγκριση 2 μελετών NSORP
Ασθενείς με IIEF>22 προεγχειριτικά

	Drug	Placebo	Nightly/ daily	PRN
REINVENT	Vardenafil	28.9	24.1	29.1
REACTT	Tadalafil	16.7	27.7	20.4

Montorsi F, et al: Eur Urol. 2008 54(4):924-31
Stolzenburg JU, et al: BJU Int. 2015 in press

Πόσο καιρό περιμένουμε για το τελικό αποτέλεσμα στη στύση;

1. 6 μήνες
2. ένα χρόνο
3. δύο χρόνια
4. τρία χρόνια



Πόσο καιρό περιμένουμε για το τελικό αποτέλεσμα στη στύση;

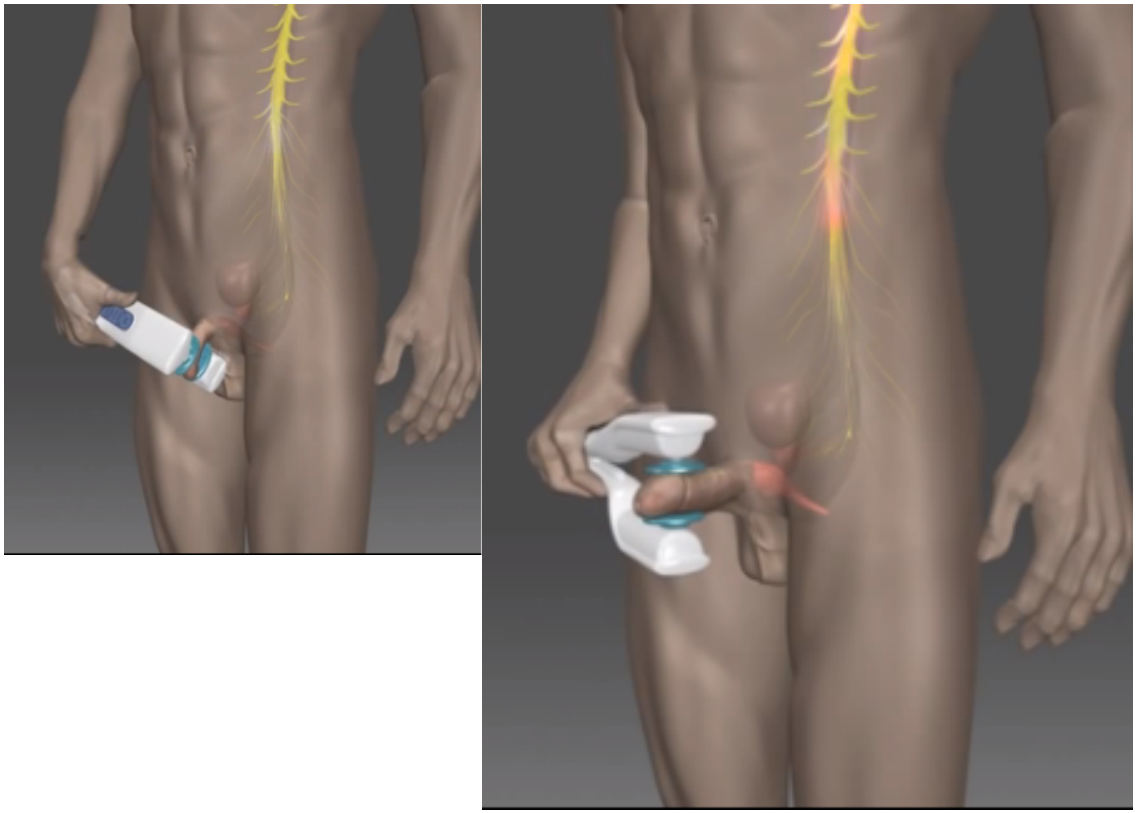
The median time to erectile function recovery was 440 days (15 months) after RRP and 180 days (6 months) after RALP.

The median time to intercourse was 700 days (23.3 months) after RRP and 340 d (11.3 months) after RALP

level of evidence: 2b

Tevari A, et al: BJU Int. 2003;92:205-210

Penile vibration stimulation



The

VIBERECT X3

Recommended for the treatment of Male Ejaculatory Dysfunction in spinally injured patients

Safe, physiological, noninvasive, and powerful tool now available to men to improve and restore their erectile health and sexual response.

The physiological alternative to drugs, injections, vacuum, and surgery for SCI men.

Click to read more...

Penile vibration stimulation

Table 1 Patient characteristics.

Variables	PVS	Control	*P* value
Median age, years	62 (46–73)	65 (49–76)	0.095
Nerve-sparing, *n*			0.23
Bilateral	19	18	
Unilateral	11	20	
Robot-assisted surgery, *n*			0.99
Yes	27	34	
No	3	4	
Median (range) preoperative IIEF-5 score	25 (19–25)	25 (18–25)	0.68
Median (range) preoperative DAN-PSS score	3.5 (0–27)	2 (0–20)	0.048
Proportion of patients using postoperative PDE5 inhibitors, *n*/*N*			
3 Months	9/30	17/38	0.16
6 Months	19/30	25/38	0.72
12 Months	17/30	19/38	0.58

- Stimulation was performed at the frenulum once daily by the patients in their own homes for at least 1 week before surgery. After catheter removal, daily PVS was reinitiated for a period of 6weeks.
- Patients were instructed in stimulating with a sequence consisting of 10 s of stimulation followed by a 10-s pause repeated 10 times (for a total of 100 s of stimulation every day).

Table 2 Erectile function outcomes in the two groups after RP.

Erectile function outcomes	PVS	Control	*P* value
Median (range) IIEF-5			
At 3 months	5 (0–25)	5 (0–25)	0.25
At 6 months	10.5 (0–25)	5 (0–25)	0.08
At 12 months	18 (0–25)	7.5 (0–25)	0.09
IIEF ≥18, *n*/*N* (%)			
At 3 months	5/30 (17)	4/38 (11)	0.46
At 6 months	13/30 (43)	9/38 (24)	0.09
At 12 months	16/30 (53)	12/38 (32)	0.07

Table 3 Continence rates and pad use after surgery.

	PVS	Control	*P* value
Continence rate			
At 3 months	65.5%	62.9%	0.83
At 6 months	83.3%	91.9%	0.28
At 12 months	90%	94.7%	0.46
Median (range) pad use			
At 3 months	1 (0–6)	1 (0–4)	0.09
At 6 months	0 (0–3)	1/3 (0–6)*	0.14
At 12 months	0 (0–2)	0 (0–3)	0.56

**One patient reported using a third of a pad daily. As there was no pre-specified decision on how to deal with such reporting, it was taken at face value when analysing the results.*

Fode, M et al: BJU Int. 2014 Jul;114(1):111-7

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Sexual Medicine

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Review

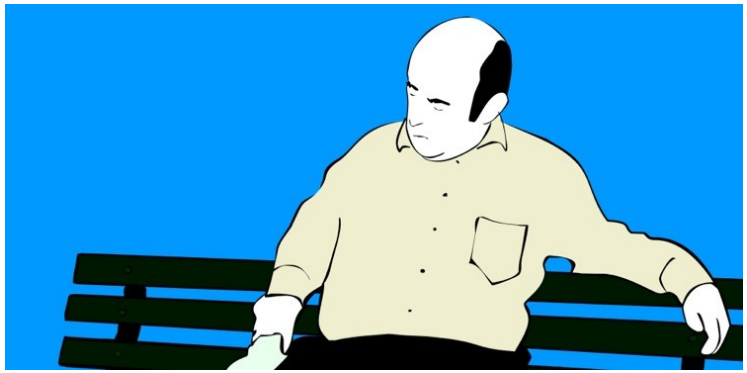
Penile rehabilitation after radical prostatectomy: what the evidence really says

Mikkel Fode, Dana A. Ohl,* David Ralph† and Jens Sønksen

*Department of Urology, Herlev University Hospital, Herlev, Denmark, *Department of Urology, University of Michigan, Ann Arbor, MI, USA, and †Institute of Urology, London, UK*

Conclusions

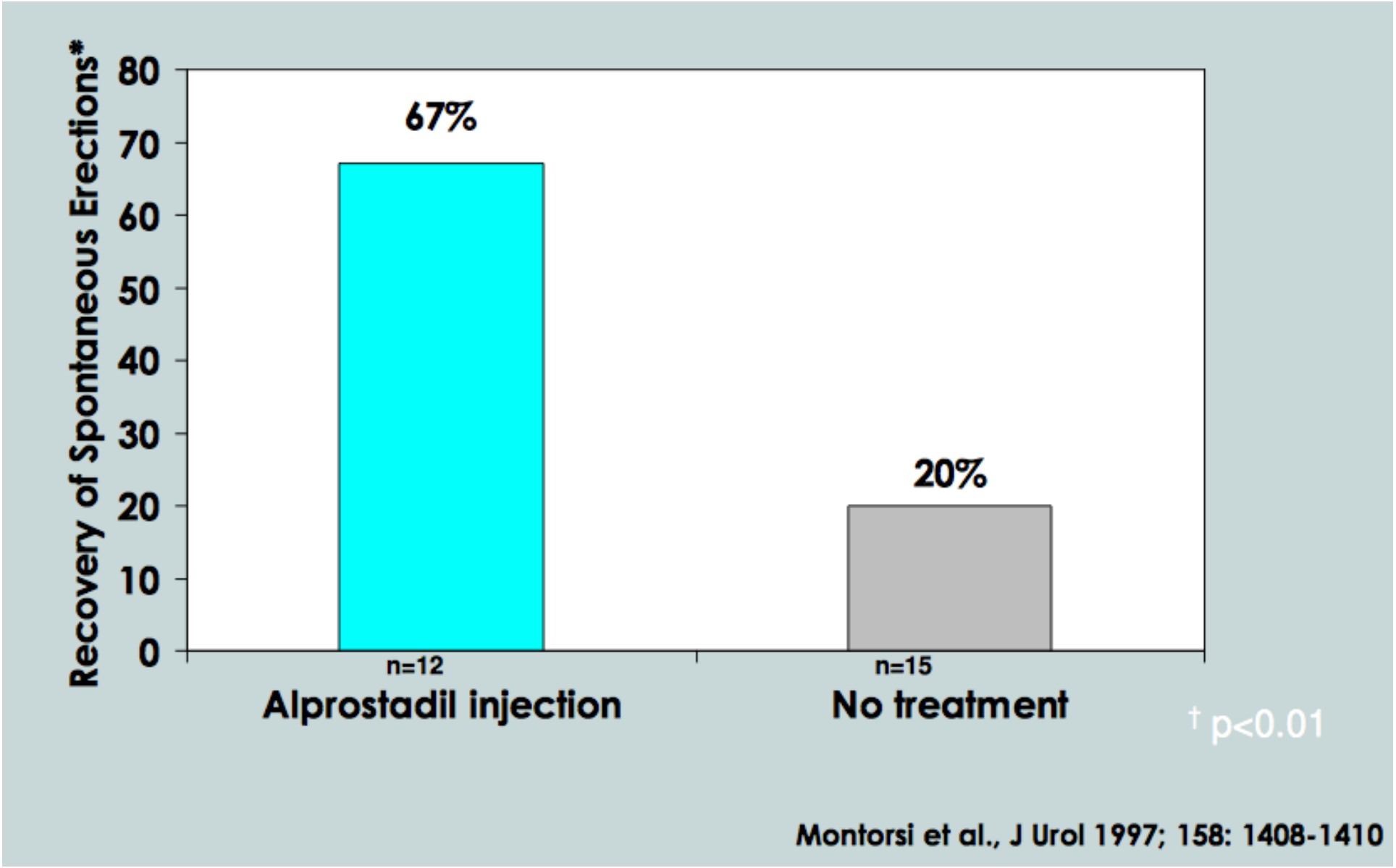
Theoretical considerations warrant early implementation of penile rehabilitation to ensure cavernous oxygenation, but there is little clinical evidence to support the use of current protocols. Certainly no specific treatment can be recommended. While animal studies are abundant, only few well designed human trials have been conducted and the results are mainly discouraging. Better documentation and/or better methods of penile rehabilitation are necessary to adhere to the principles of evidence-based medicine. Until this is addressed we should consider moving away from a rehabilitation paradigm toward a goal-oriented treatment paradigm in our daily practice. In accordance with patient wishes, treatments should be prescribed in doses and combinations that actually induce erections and allow sexual intercourse if possible. Such treatments should be offered early after RP to minimize the possible detrimental psychological effects. One must be very careful not to repeat the statement that penile rehabilitation regimens improve erectile function after RP so many times that it becomes a truth, even without the proper scientific backing.



Το περιστατικό (6)

- Ο Γιώργος είναι αγχωμένος και θέλει να έχει σεξουαλική επαφή άμεσα. Ο ιατρός του συστήνει αλπροσταδίλη 10μgr με καλή απάντηση, αλλά με πόνο.

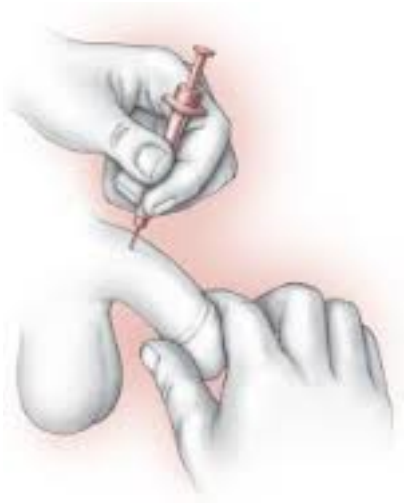
Οι ενέσεις



Montorsi et al., J Urol 1997; 158: 1408-1410

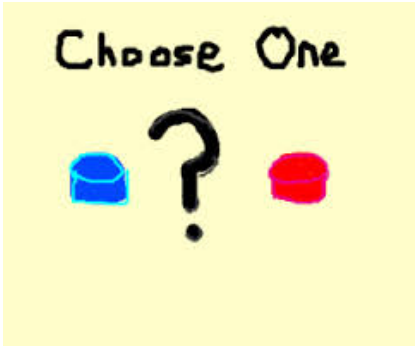
Οι ενέσεις

- Γιατί έχει πόνο;
- Πονάει περισσότερο λόγω της επέμβασης;



Ποιο φάρμακο προκαλεί πόνο στις ενδοσηραγγώδεις ενέσεις;

1. παπαβερίνη
2. Φεντολαμίνη
3. αλπροσταδίλη
4. VIP



Ποιο φάρμακο προκαλεί πόνο στις ενδοσηραγγώδεις ενέσεις;

- 87 patients who underwent nerve-sparing laparoscopic RP, reported normal preoperative erectile function, and used IAI for 12 months.
- Patients started with 2.5 μg alprostadil and were advised to increase the dose gradually until erection hardness allowed vaginal penetration.

Results

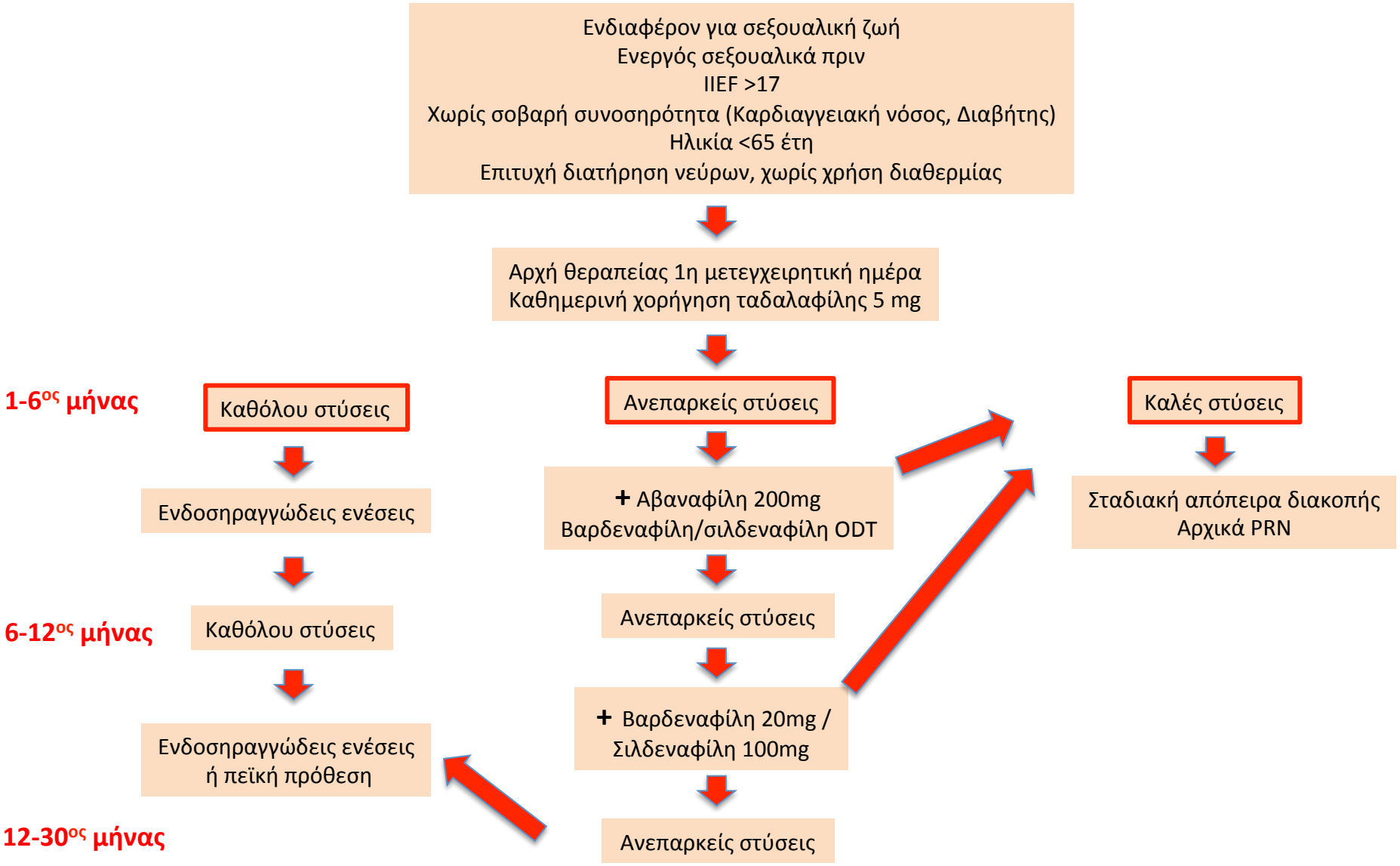
- The mean alprostadil dose was 8.1 μg after 6 months and 9.9 μg after 12 months.
- With/without IAI, mean IIEF-15 scores for erectile and orgasmic function and mean EHS score were 14.6/4.6, 4.1/2.1, and 2.5/0.4, respectively, after 6 months; and 17.2/5.4, 4.9/2.6, and 2.7/0.9 after 12 months.
- Pain scores were 3.2 ± 2.5/10 and 2.5 ± 2.5/10 after 6 and 12 months, respectively.
- Pain intensity correlated with erectile function ($r = -0.23$), intercourse satisfaction ($r = -0.23$), and overall satisfaction ($r = -0.24$) after 6 months but not after 12 months.

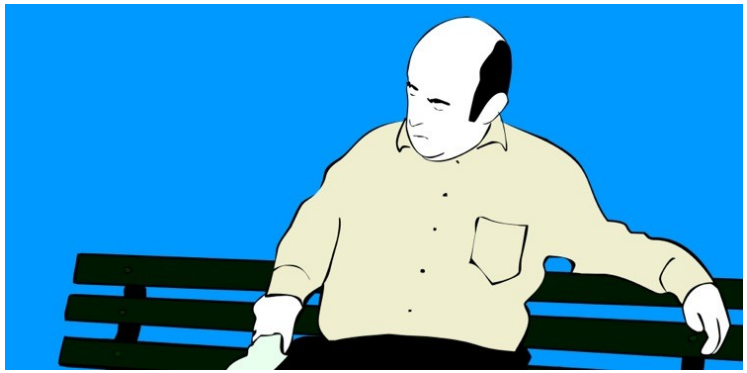
Yiou R, et al: J Sex Med, 8 (2011), pp. 575–582

7 κρίσιμα ερωτήματα για τα πρωτόκολλα αποκατάστασης της στύσης

1. Ηλικία ασθενή
2. Στυτική λειτουργία προεγχειριτικά
3. Συνοδά νοσήματα
4. Πότε να αρχίσει η χορήγηση PDE5i
5. Επιλογή φαρμάκου
6. Δοσολογικό σχήμα
7. Διάρκεια χορήγησης

Αλγόριθμος αποκατάστασης στυτικής λειτουργίας μετά ριζική προστατεκτομή



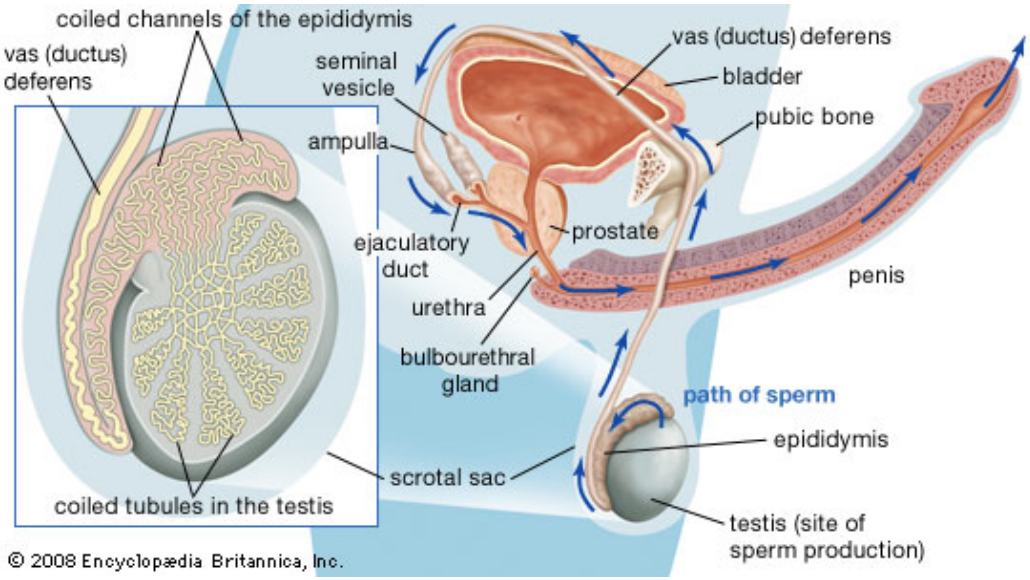


Το περιστατικό (7)

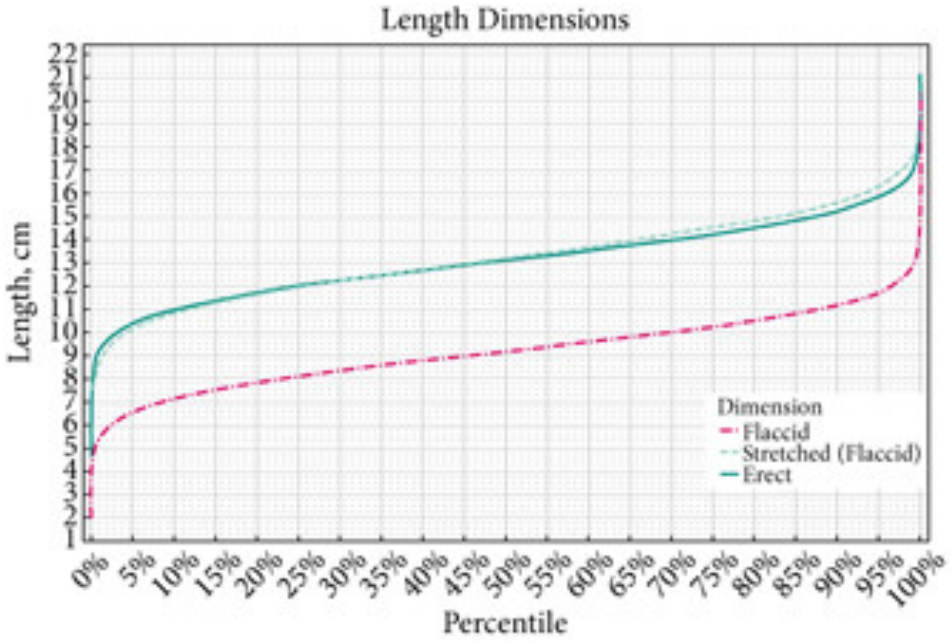
- Γίνεται αλλαγή σε 0.5ml tri-mix. Αναφέρει επιτυχείς επαφές, διάρκειας 1 ώρας. Εκφράζει επίσης παράπονο για έλλειψη καλής αίσθησης οργασμού (στεγνός οργασμός). Αποφεύγει επίσης τα προκαταρκτικά λόγω αναφερόμενης μείωσης του μήκους του πέους.

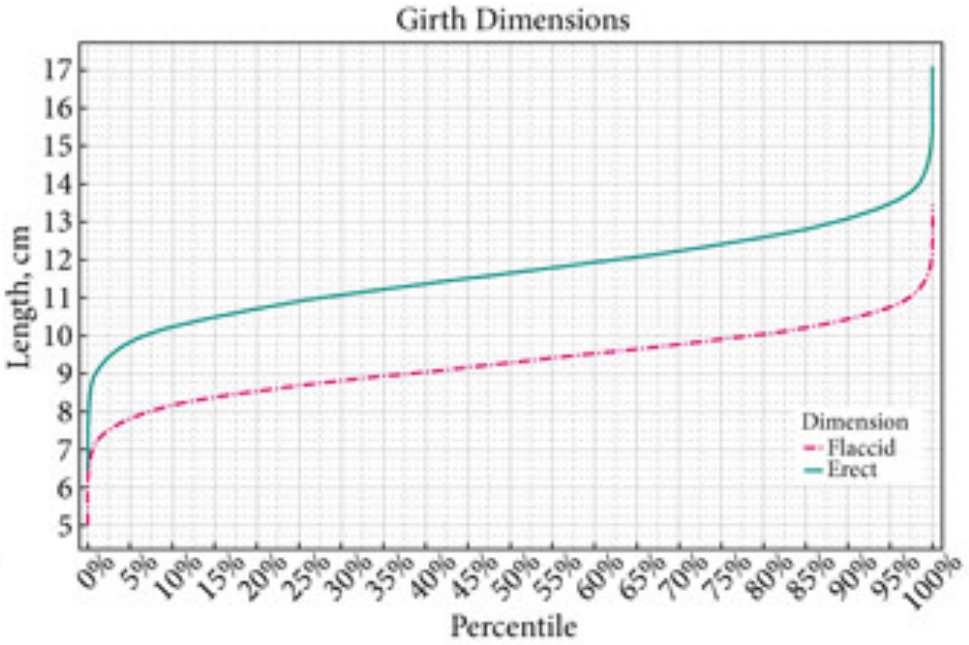
Οργασμός και μήκος πέους

- Έχει δίκιο οτι άλλαξε η αίσθηση του οργασμού;
- Έχει δίκιο για τη μείωση του μήκους;

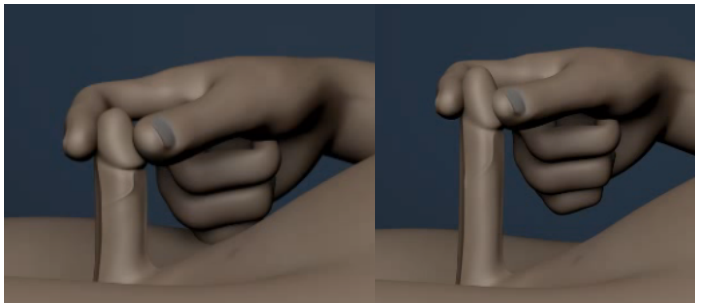


Μήκος πέους





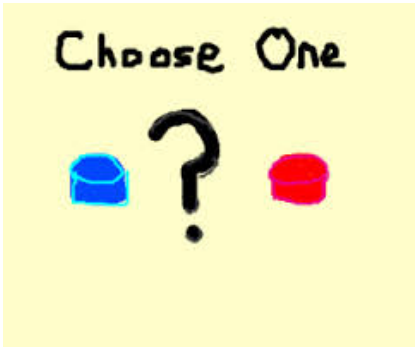
Flaccid (n = 10,704) :	9.16±1.57 cm
Stretched length (n=14,160):	13.24±1.89 cm
Erect length (n = 692):	13.12±1.66 cm
Flaccid circumference (n = 9,407):	9.31±0.90 cm
Erect circumference (n = 381):	11.66±1.10 cm



Veale D, et al: BJU Int. 2014 Dec 8. doi: 10.1111/bju.13010

Ποια πρακτική περιορίζει την απώλεια μήκους πέους;

1. Χορήγηση ενδοσηραγγωδών ενέσεων 2 φορές/εβδομάδα
2. Κατ' επίκληση PDE5i
3. Καθημερινή χορήγηση PDE5i
4. Ολα τα παραπάνω



Πόσο μειώνεται το μήκος του πέους;

Table 1 Penile shortening after radical prostatectomy.

Study	No. of patients	Mean age, yr (range)	Type of surgery (%)	Assessment of preoperative EF using IIEF	Patients with decrease in penile stretched length (%)	Penile shortening	Time after surgery
Fraiman et al [33]	100	60.6 (47–74)	BNSRP (90)	No	NA*	NA*	Mean: 9.4 mo (range: 1.7–27.6)
Munding et al [34]	31	NA	NA	No	71	0.5–4cm	3 mo
Savoie et al [35]	63	59.1 (42–76)	BNSRP (74.6)	No	68	0.5–5cm	3 mo
Gontero et al [36]	126	65.4 (SD: 6.7)	BNSRP or UNSRP (39.7)	Yes	100	2.3cm at 12 mo after surgery, peak change at catheter removal	At catheter removal and at 3 mo, 6 mo, and 12 mo
Briganti et al [37]	33	56.5 (50–65)	BNSRP (100)	Yes	No shortening	No shortening	6 mo

* Penile shortening was recorded as time from surgery increased.

BNSRP=bilateral nerve-sparing radical prostatectomy; UNSRP=unilateral nerve-sparing radical prostatectomy; IIEF=International Index for Erectile Function; EF=erectile function; SD=standard deviation; NA: not available.

Hatzimouratidis K et al: Eur Urol; 55:334-347, 2009

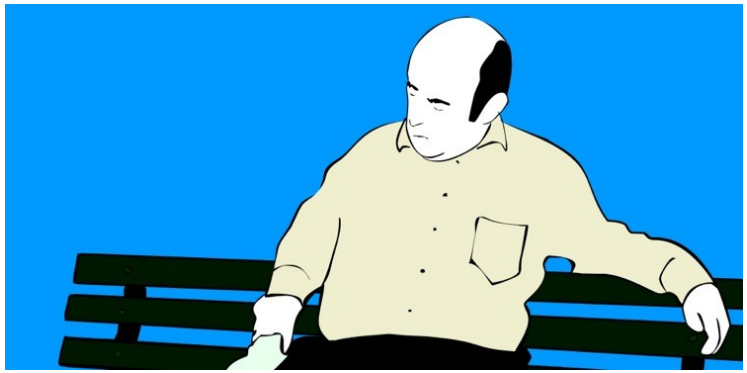
Νόσος Peyronie μετά ριζική προστατεκτομή

Sample: 1011 subjects who developed PD within 3 years after RP and compared them with subjects who did not.

RESULTS:

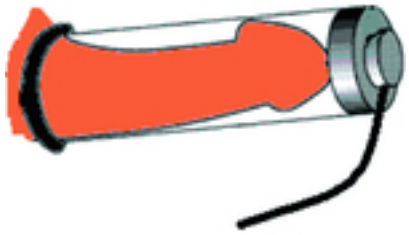
- The study population included 1,011 subjects, and PD incidence in this population was 15.9%.
- Mean time to develop PD after RP was 13.9 +/- 0.7 months.
- Mean curvature magnitude was 31 + 17 degrees.
- On univariate analysis, younger age (mean age of 59 + 7 in men with PD vs. 60 + 7 years in men without PD, P = 0.006) and white race (vs non-white, 18% vs. 7%, P < 0.001) were predictive of PD development after RP,
- Post-op erectile function was not a predictor of PD development.
- On multivariate analysis, younger age (odds ratio (OR) = 1.3, for 5-year decrease in age) and white race (OR = 4.1, vs. non-white) remained independent significant predictors.

Tai, R, et al: J Sex Med. 2010 Mar;7(3):1254-61



Το περιστατικό (8)

- Επισκέπτεται άλλον Ουρολόγο και του συστήνει ταδαλαφίλη ημερήσια και χρήση αντλίας κενού κάθε μέρα για 1 ώρα για το μέγεθος του πέους.
- Πλέον, 6 μήνες μετά την επέμβαση, θεωρεί ότι το μέγεθος βελτιώθηκε ελαφρώς, αλλά οι στύσεις δεν είναι επαρκώς σκληρές.



Μήκος πέους μετά ριζική προστατεκτομή: αντλίες κενού

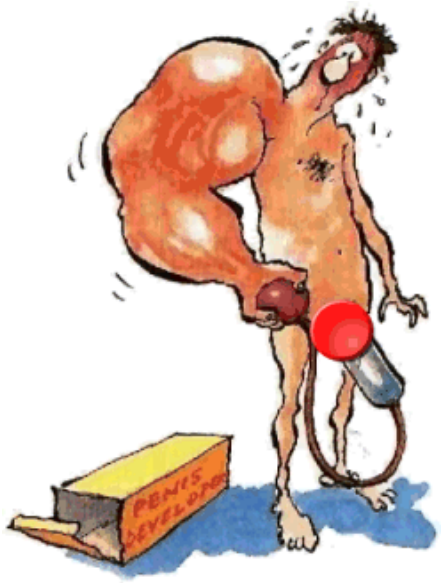
- 20 pts, VED to achieve full erection 10 consecutive times over a period of approximately 2 minutes without constriction ring.
- Mean age and time from surgery was 58.2 years and 12.6 months, respectively,
- Use of the VED significantly increased both glanular and corporal oximetry relative to the baseline values for the entire 60 minutes.
- An initial increase of 55% was seen in corporal oxygenation with VED use.

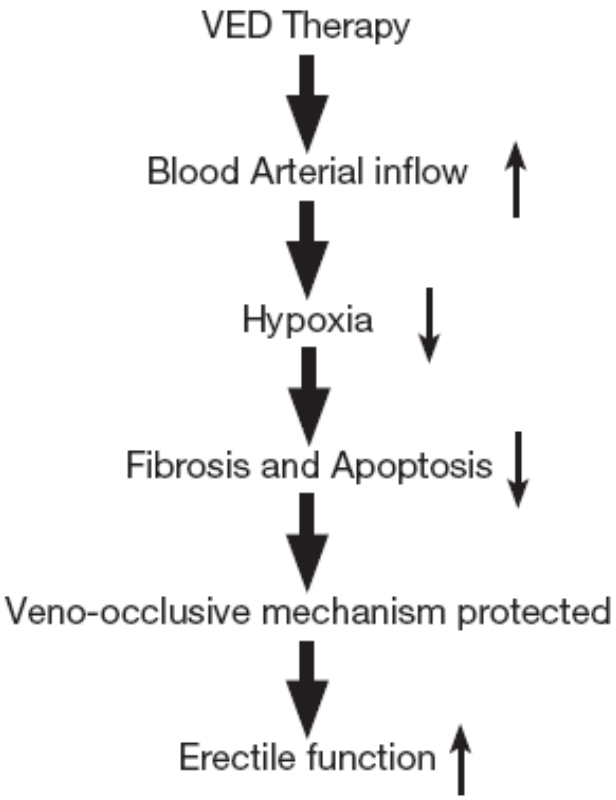
Welliver RC Jr et al: J Sex Med. 2014 Apr;11(4):1071-7

- **How to use it:**
- VED immediately after catheter removal.
- Constricting ring only when intercourse is desired.
- If it produces erection, replace the VED with PDE5i use only.
- If PDE5i moderate erections, VED may add before intercourse.

Αντλία και ημερήσια χορήγηση

- Η ημερήσια χορήγηση έχει νόημα για πόσο καιρό και σε ποιους ασθενείς;
- Η χρήση αντλίας κενού θα αυξήσει το μήκος;
- Η χρήση αντλίας θα βελτιώσει τις στύσεις;

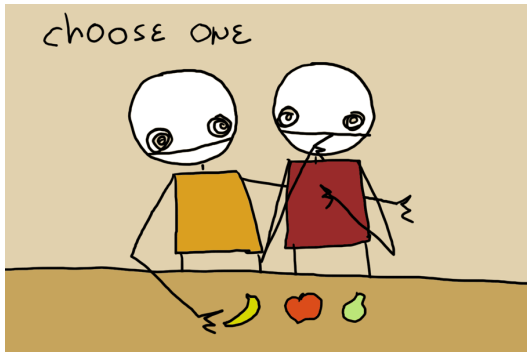


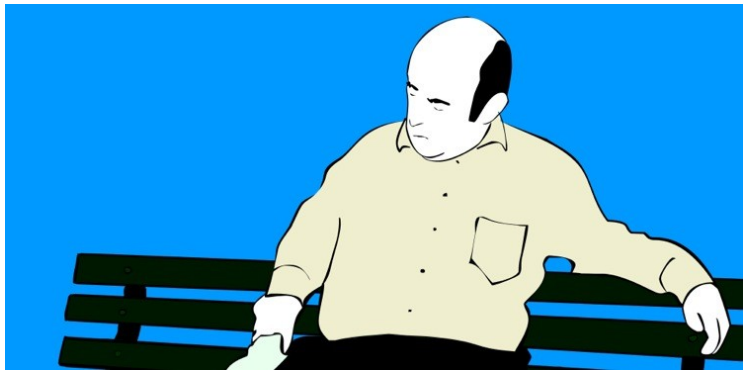


Lin, H, Wang, R. Trans Androl Urol, 2, 2013

Τι θα συστήσετε;

- συνδυασμός ημερήσιας και κατ’ επίκληση λήψης PDE5i
- συνδυασμός PDE5i και τεστοστερόνης
- συνδυασμός PDE5i και ενδοσηραγγωδών ενέσεων
- Πεϊκή πρόθεση



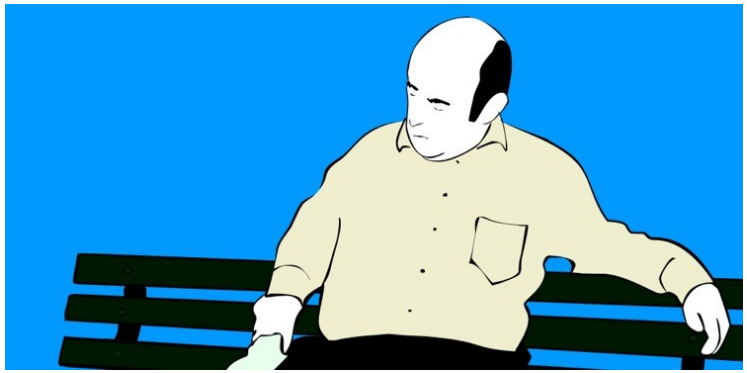


Το περιστατικό (9)

- Ο Γιώργος, με χρήση ημερήσιας δόσης και κατ’ επίλκηση – μια ώρα πριν την επαφή, αναφέρει για πρώτη φορά επαρκείς στύσεις.
- Ενα χρόνο μετά την επέμβαση ο Γιώργος είναι ικανός για επαφή με μόνο κατ’ επίκληση χρήση PDE5i. Έχει ξαναρχίσει τα προκαταρκτικά και χαίρεται το σεξ με τη γυναίκα του.

Πιστεύεται ότι είναι χαρούμενος ο Γιώργος;

- Σκληρές στύσεις
- Επαρκής διάρκεια
- Η σύζυγος χαρούμενη
- Ολα καλά;



Το περιστατικό (10)

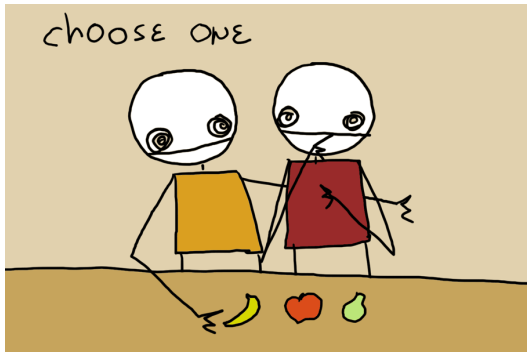
- 2 χρόνια μετά ο Γιώργος αναφέρει και αυτόματες στύσεις χωρίς φάρμακο, αν και ομολογεί ότι με το φάρμακο τις χαίρεται περισσότερο.
- Παραπονείται όμως γιατί η βάλανος δεν φουσκώνει και είναι κρύα.

Η κρύα βάλανος

- Υπάρχει θεραπεία για τη κρύα βάλανο;
- Έχει νόημα η παραπομπή σε σεξολόγο;

Τι θα συστήσετε;

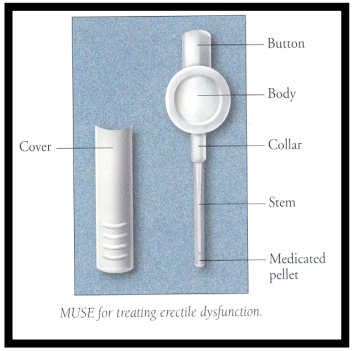
- Επίσκεψη σε σεξολόγο
- Χρήση PDE5i σε μεγαλύτερη δόση
- Ενδοουρηθρική αλπροσταδίλη
- Πεϊκή πρόθεση



Η κρύα βάλανος

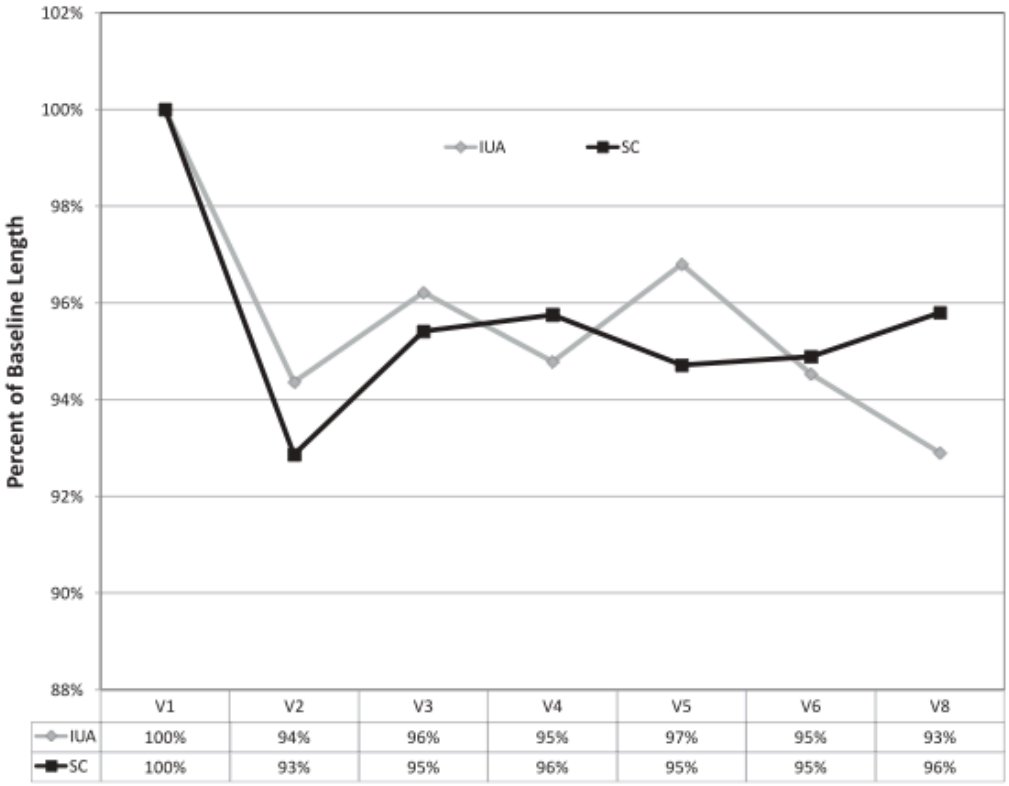
- Υπάρχει θεραπεία για τη κρύα βάλανο;
- Έχει νόημα η παραπομπή σε σεξολόγο;

Τι θα συστήσετε;



MUSE for treating erectile dysfunction.

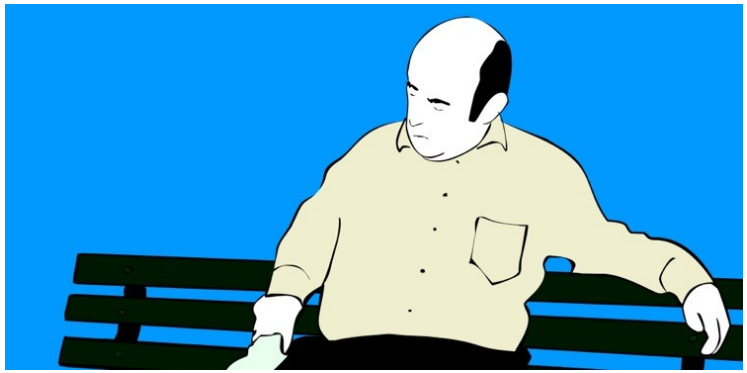
Η ενδοουρηθρική χορήγηση βοηθά;



	V1	V2	V3	V4	V5	V6	V8
IUA	100%	94%	96%	95%	97%	95%	93%
SC	100%	93%	95%	96%	95%	95%	96%

Figure 5. Percent SPL change from baseline by medication and V

McCullough, W.G, et al: J Urol, 183 (2010), pp. 2451–2456



Το περιστατικό (11)

- Ο γιατρός του τον στέλνει σε σεξολόγο...

Figure 1 An overview of prostate cancer treatment sequelae contributing to sexual dysfunction

Cormie, P. *et al.* (2013) Exercise therapy for sexual dysfunction after prostate cancer
Nat. Rev. Urol. doi:10.1038/nrurol.2013.206

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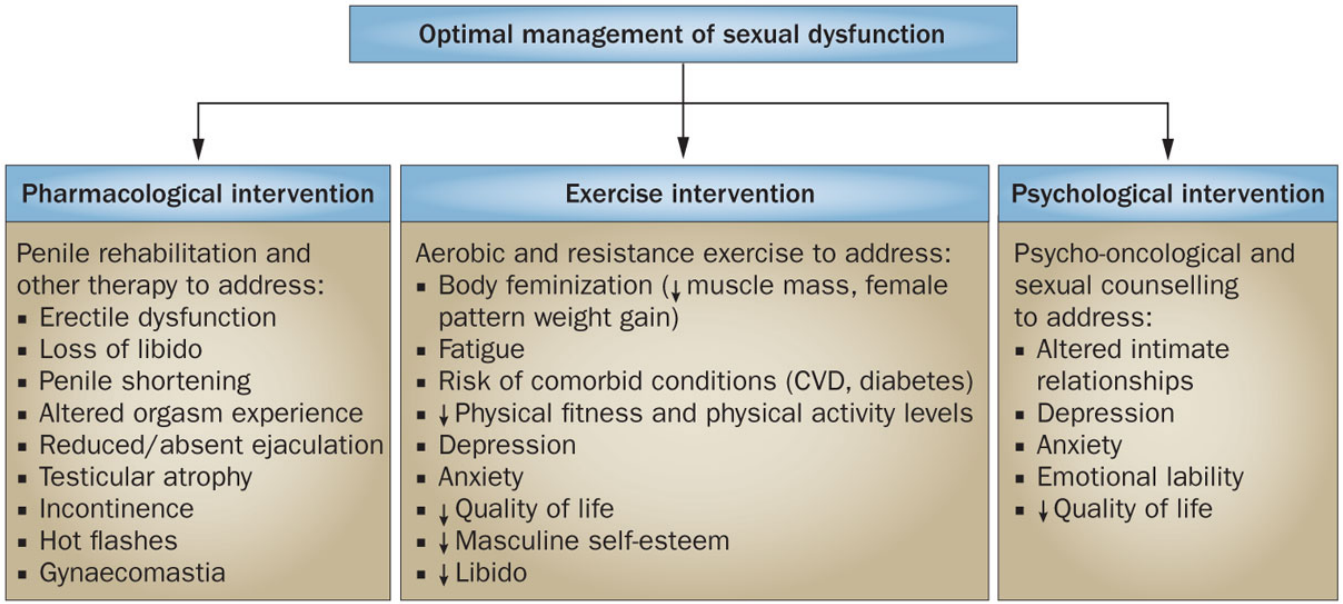
Figure 3 Proposed multidisciplinary model for managing sexual dysfunction secondary to prostate cancer treatment



Cormie, P. *et al.* (2013) Exercise therapy for sexual dysfunction after prostate cancer
Nat. Rev. Urol. doi:10.1038/nrurol.2013.206

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ΕΥΧΑΡΙΣΤΟΥΜΕ