Percorsi Simpesv

Prevenzione, diagnosi e cura dell'incontinenza urinaria

PDTA pazienti incontinenti, gestione di 2° livello:

-terapia farmacologica

-terapia chirurgica

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Società Italiana di Urodinamica
Continenza Neurourologia Pavimento Pelvico

Initial Management of Urinary Incontinence in Women

HISTORY

Incontinence on physical activity

Incontinence with mixed symptoms

Incontinence / frequency with urgency

Complicated incontinence

- Recurrent incontinence
- Incontinence associated with:
  - Pain
  - Hematuria
  - Recurrent infection
  - Significant voiding symptoms
  - Pelvic irradiation
  - Radical pelvic surgery
  - Suspected fistula

CLINICAL ASSESSMENT

- General assessment (see relevant chapter)
- Urinary symptom assessment (including frequency-volume chart and questionnaire)
- Assess quality of life and desire for treatment
- Physical examination: abdominal, pelvic and perineal
- Cough test to demonstrate stress incontinence if appropriate
- Urinalysis ± urine culture -> if infected, treat and reassess *If appropriate*
- Assess oestrogen status and treat as appropriate
- Assess voluntary pelvic floor muscle contraction
- Assess post-void residual urine

PRESUMED DIAGNOSIS

STRESS INCONTINENCE presumed due to sphincteric incompetence

MIXED INCONTINENCE (treat most bothersome symptom first)

OAB -with or without URGENCY INCONTINENCE presumed due to detrusor overactivity

- If other abnormality found e.g.
- Significant post void residual
- Significant pelvic organ prolapse
- Pelvic mass

MANAGEMENT

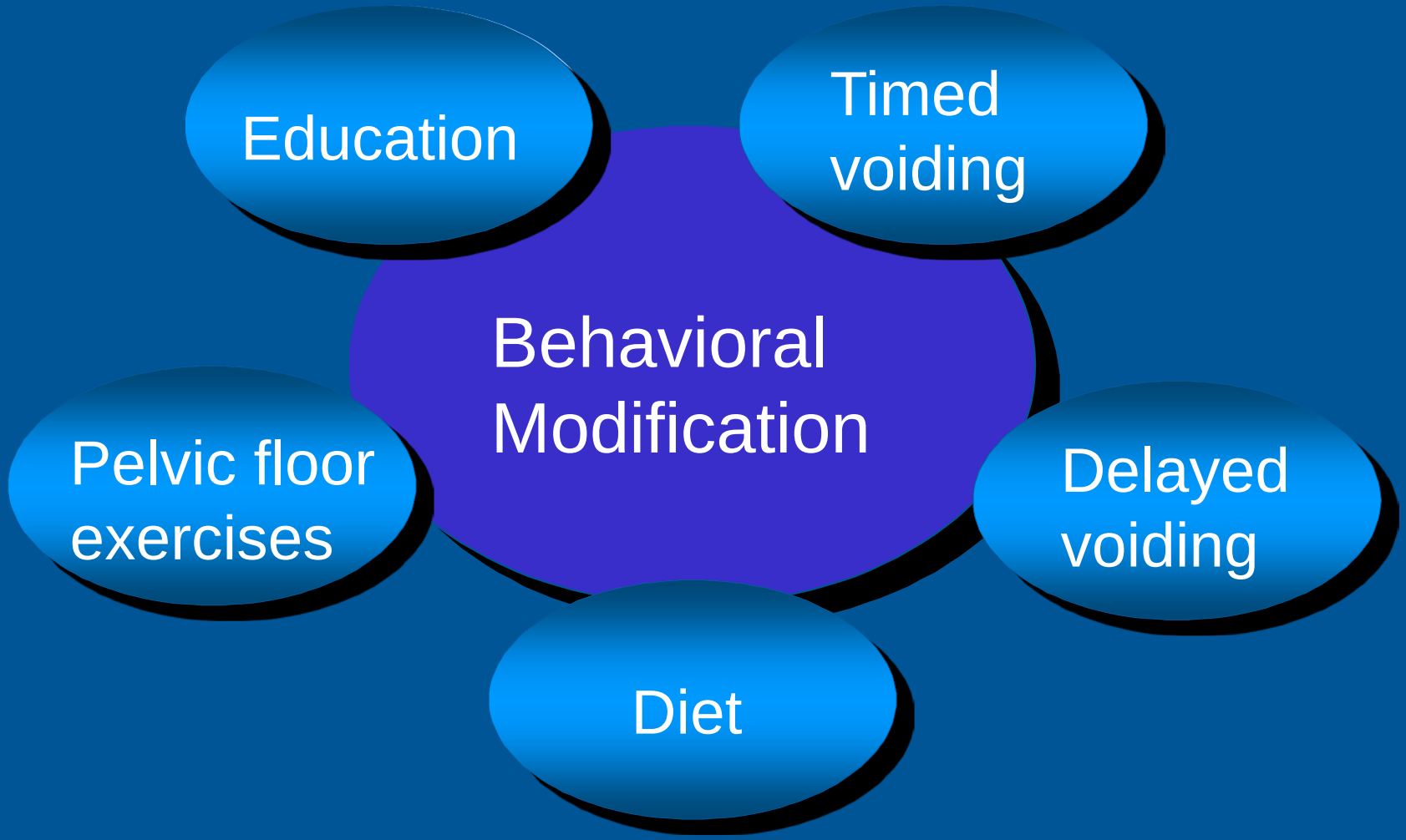
- Life style interventions.
- Pelvic floor muscle training for SUI or OAB
- Bladder retraining for OAB
- Duloxetine* (SUI) or antimuscarinic (OAB ± urgency incontinence)
- Other adjuncts, such as electrical stimulation
- Vaginal devices, urethral inserts

Failure

SPECIALIZED MANAGEMENT

* Subject to local regulatory approval (see black box warning).

Behavioral Modification



Bladder Training

- Modify bladder function
- Methods
  - bladder diary
  - gradually increase void interval
  - teach coping strategies
- Strengthen pelvic floor muscles and improving bladder stability

Management of Overactive Bladder

- Behavioral therapies[1]
- Pharmacologic therapy
- Combined pharmacologic and behavioral therapy provides improved outcomes[2,3]

1. Mattiasson A. *Urology.* 2000;55(suppl 5a):12-13.
2. Mattiasson A. *Neuro Urodyn*. 2001;20:403-404.
3. Burgio et al. *JAGS.* 2000;48:370-374.

Drugs used in the treatment of OAB

There are a number of pharmacological mechanisms that in theory could reduce overactive detrusor muscle activity.

- ***Antimuscarinic drugs***
- ***Drugs acting on membrane channels***
- ***Drugs with mixed actions***
- ***Antidepressants***
- ***Alpha-adrenoreceptor antagonists***
- ***Beta-adrenoreceptor antagonists***
- ***PDE-5 inhibitors (for male LUTS/OAB)***
- ***Toxins***
- ***Hormones***

….However

EAU Guidelines, 2009

Drugs	LE	GR
Antimuscarinic drugs		
Tolterodine	1	A
Trospium	1	A
Solifenacin	1	A
Darifenacin	1	A
Fesoterodine	1	A
• Propantheline	2	B
• Atropine, hyoscyamine	3	C
Drugs with mixed actions		
• Oxybutynin	1	A
• Propiverine	1	A
• Dicyclomine	3	C
• Flavoxate	2	

To date, the only approved treatments with <u>Grade A recommendation</u> based on <u>level 1 evidence</u> are anticholinergic drugs (specifically <u>antimuscarinic</u>)

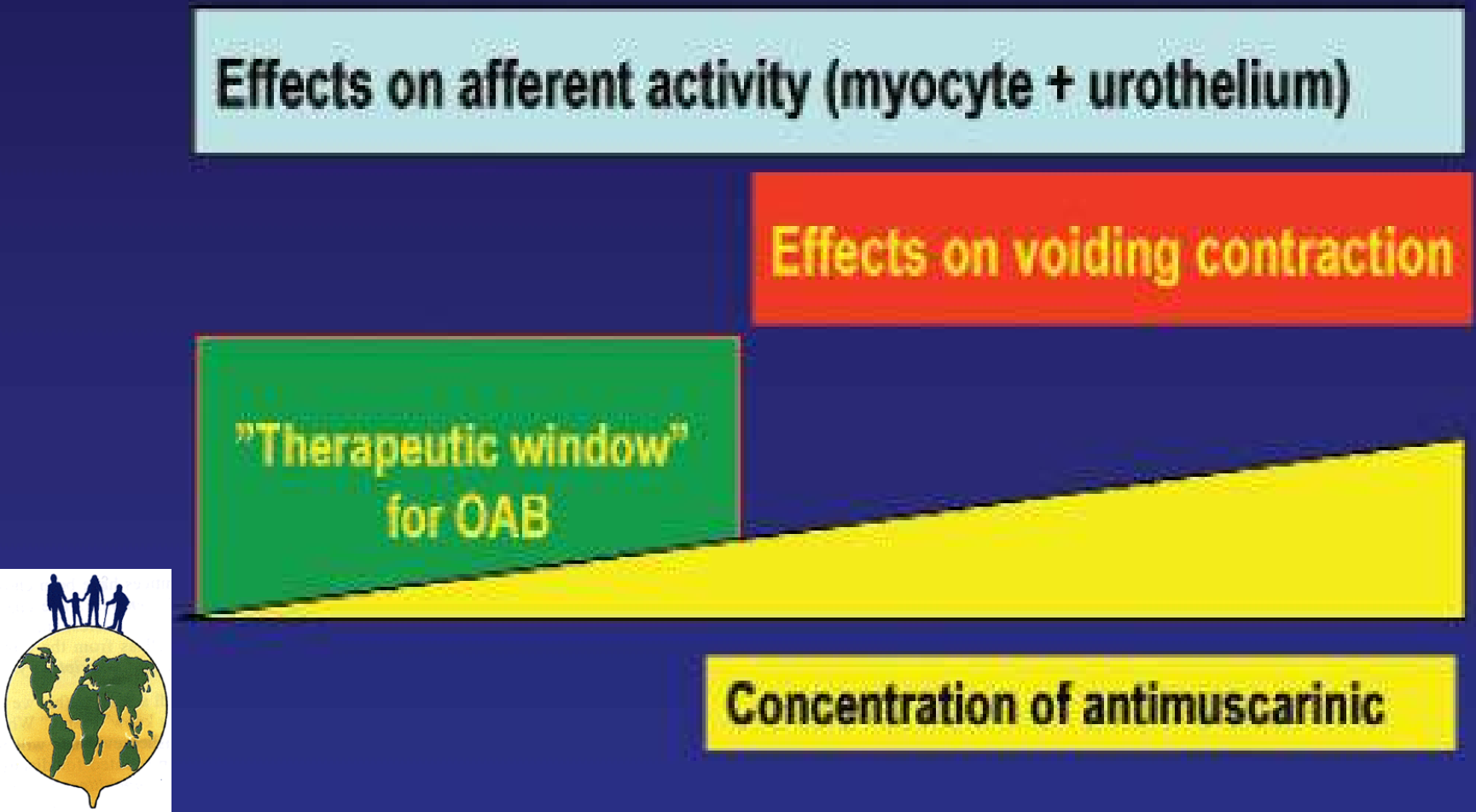
EAU Guidelines, 2009; Incontinence, 2009

Antimuscarinic drugs on the market

- *Oxybutynin* ***(IR 7.5-10mg/day, IR 15 mg/day, TDS 3.9-4 mg/day)***
- *Tolterodine* ***(IR 2mg/day, IR 4 mg/day, ER 4mg/day)***
- *Propiverine,* ***(IR 30mg/die, IR 45 mg/die, ER 20mg/die, ER 30 mg/die)***
- *Trospium,* ***(40mg/die)***
- *Solifenacin* ***(5mg/day, 10 mg/day)***
- *Darifenacin* ***(7.15 mg/day, 15 mg/day)***
- *Fesoterodine* ***(4 mg/day, 8 mg/day)***

Novara G., et al., Eur Urol, 2008

Rationale for Use of Antimuscarinics in OAB



Safety in patients with BOO

The role of anticholinergics in men with lower urinary tract symptoms suggestive of benign prostatic hyperplasia: a systematic review and meta-analysis

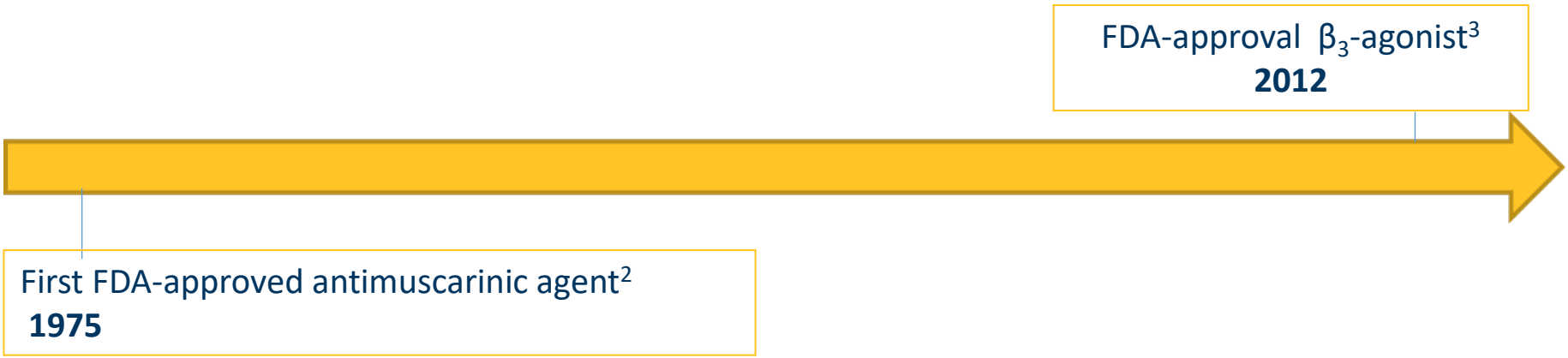
Benedict T. Blake-James*, Arash Rashidian†‡, Youko Ikeda* and Mark Emberton*†

The concerns that anticholinergics might be associated with impaired voiding and AUR do not appear to be supported by the evidence from the studies assessed. Anticholinergics are associated with a small rise in PVR, but not an increased rate of AUR.

BJU Int, 2006

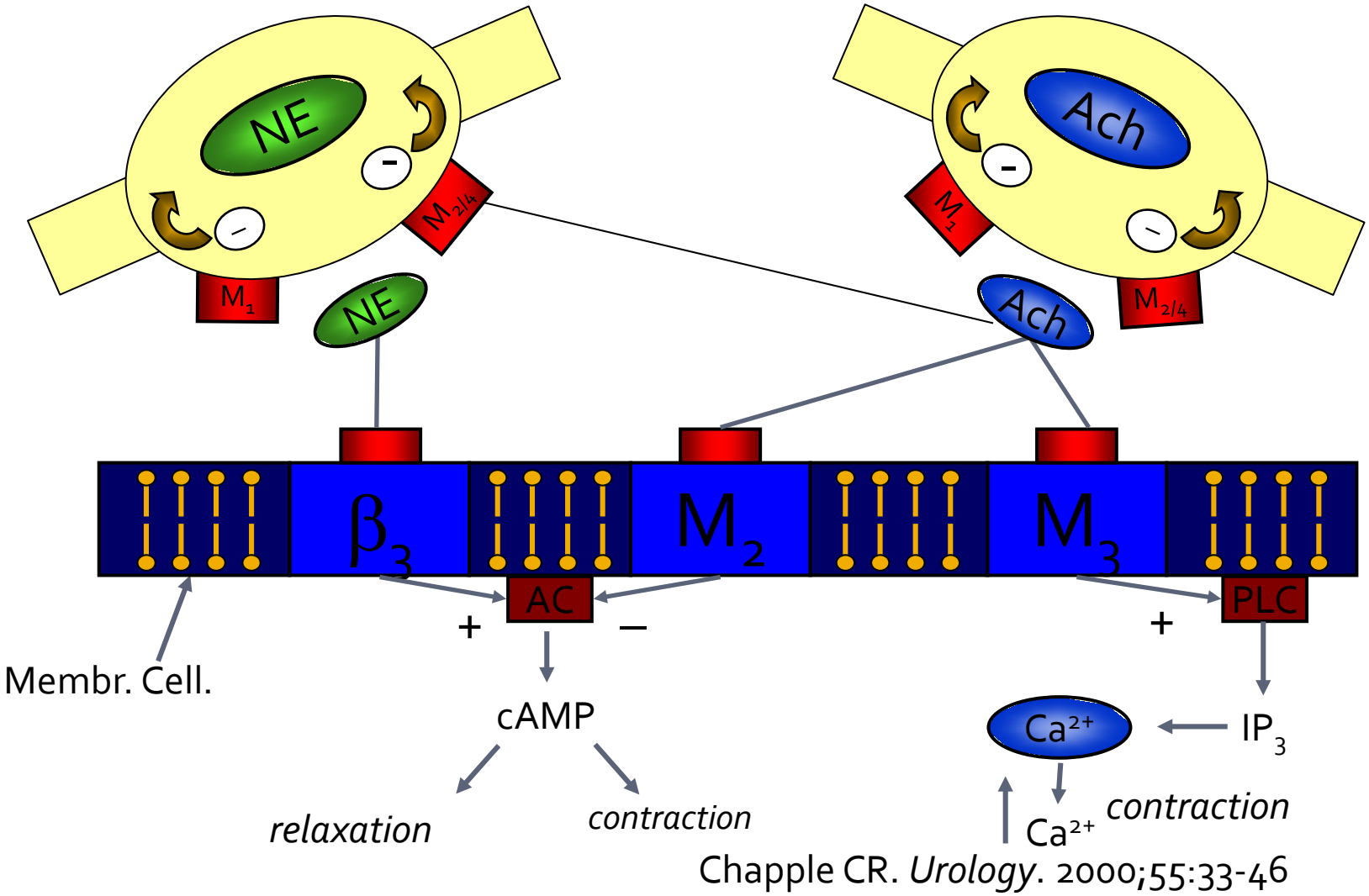
Other drug classes to treat OAB?

- *"Despite intensive research, few new therapeutic principles have emerged and been demonstrated to have sufficient efficacy and adverse effect profiles to be accepted for approval and clinical use"*[1]
- Research indicated that stimulation of β_3-receptors leads to bladder relaxation
- Discovery of β_3-adrenoceptors, predominately present on the bladder wall ⇒ development of β_3-adrenoceptor agonist



1. Andersson KE. Curr Urol Rep 2013;doi:10.1007/s11934-013-0335-8; 2. Kennelly MJ Rev Urol 2010;12:12-9;
3. http://www.accessdata.fda.gov/drugsatfda_docs/label/2012/202611s000lbl.pdf

Effects of NE e Ach on Bladder activity



Chapple CR. *Urology*. 2000;55:33-46

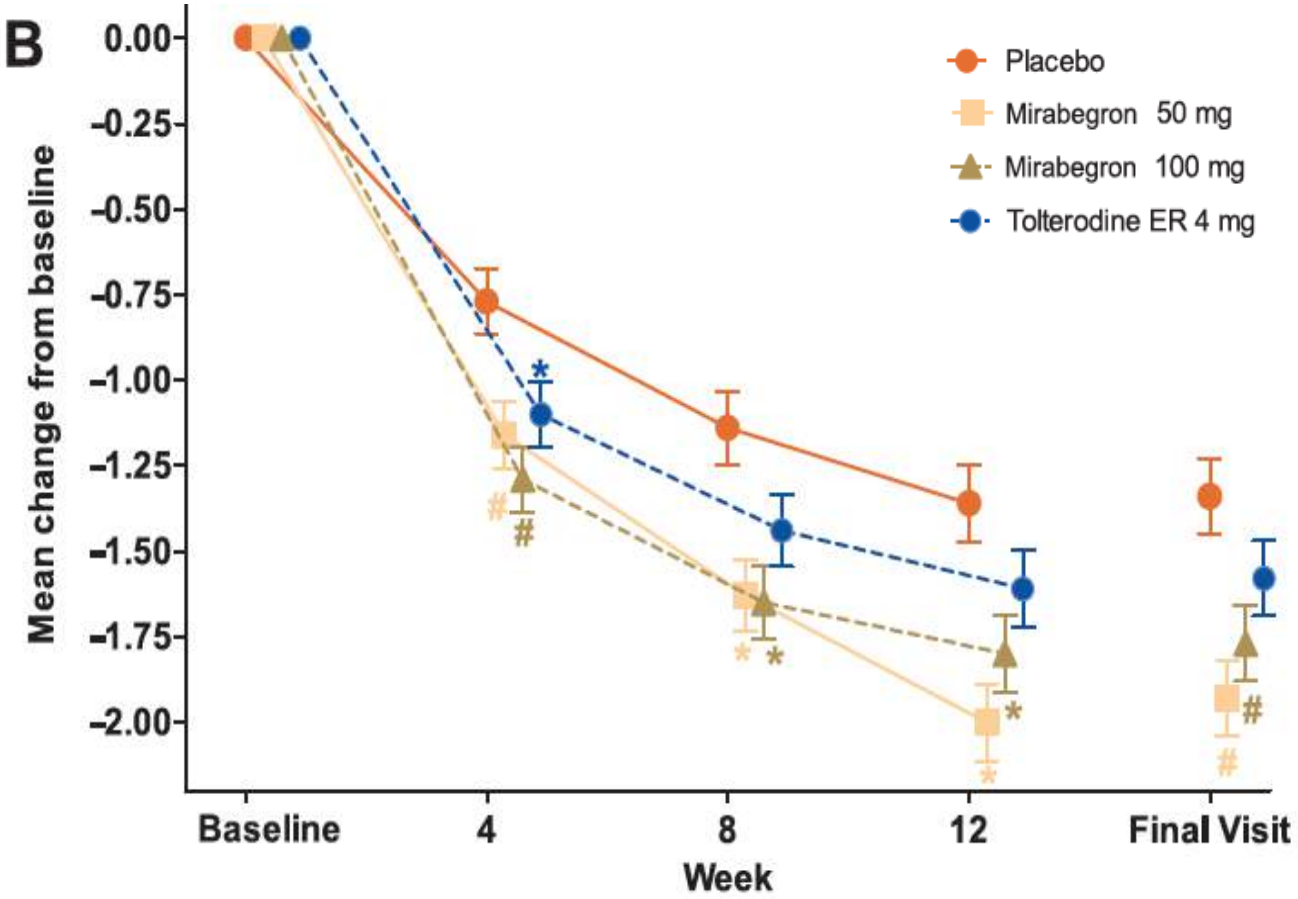
Binding affinity (K_i) of mirabegron for human ARs[1]

Receptor subtype	Mirabegron K_i, nmol/L*
β_1-AR	4,200 ± 900
β_2-AR	1,300 ± 300
β_3-AR	40 ± 20.2

Lower K_i values represent higher affinity

*** Determined in *in vitro* receptor binding studies using Chinese hamster ovary cells expressing human β-AR subtypes ; values are means of three replicates (± standard error)**

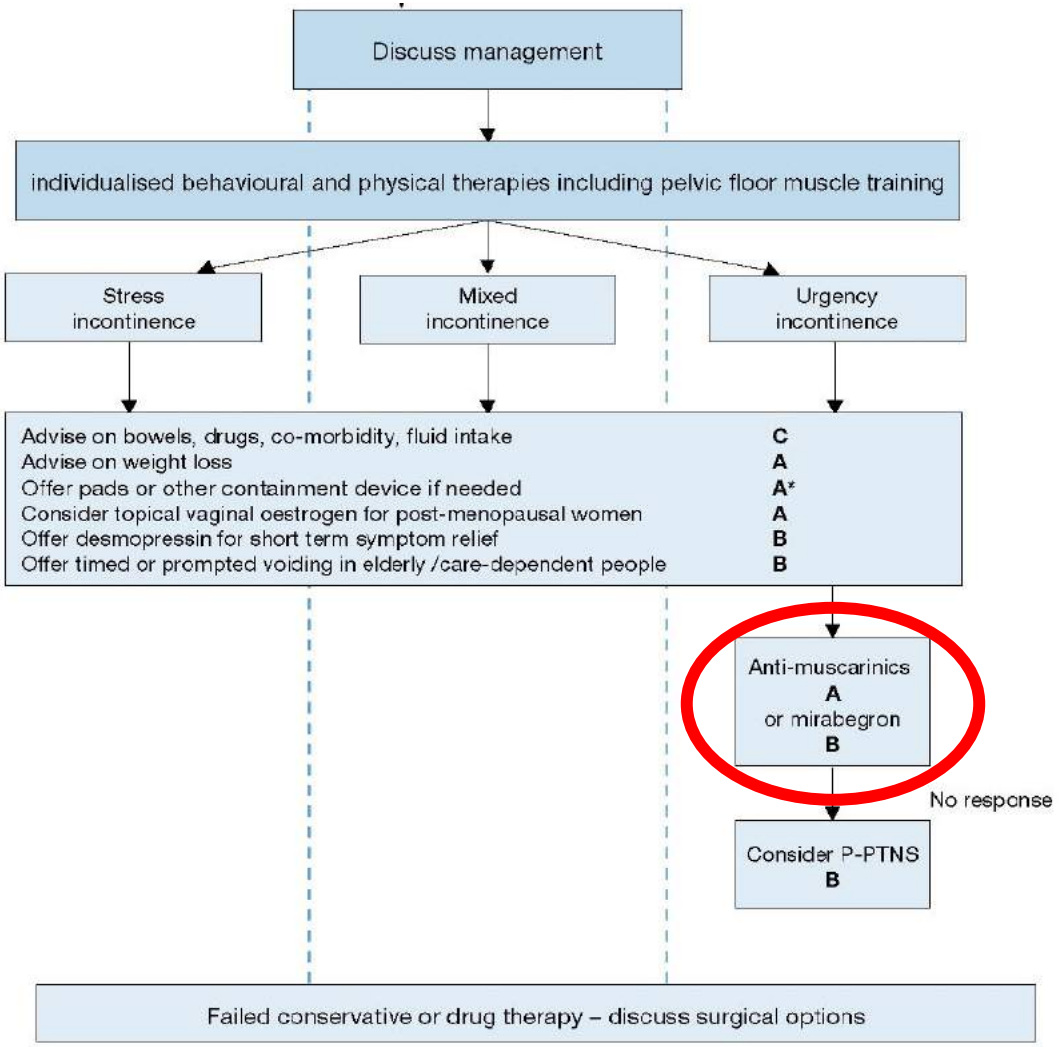
End-point co-primario: numero medio di minzioni per 24 h



All p values <0.05 for Mirabegron 50 and 100 mg vs placebo

Khullar V et al. Eur Urol 2013; 63: 283 – 295

Women presenting with UI
EAU guidelines 2016



Mirabegron for treating symptoms of overactive bladder

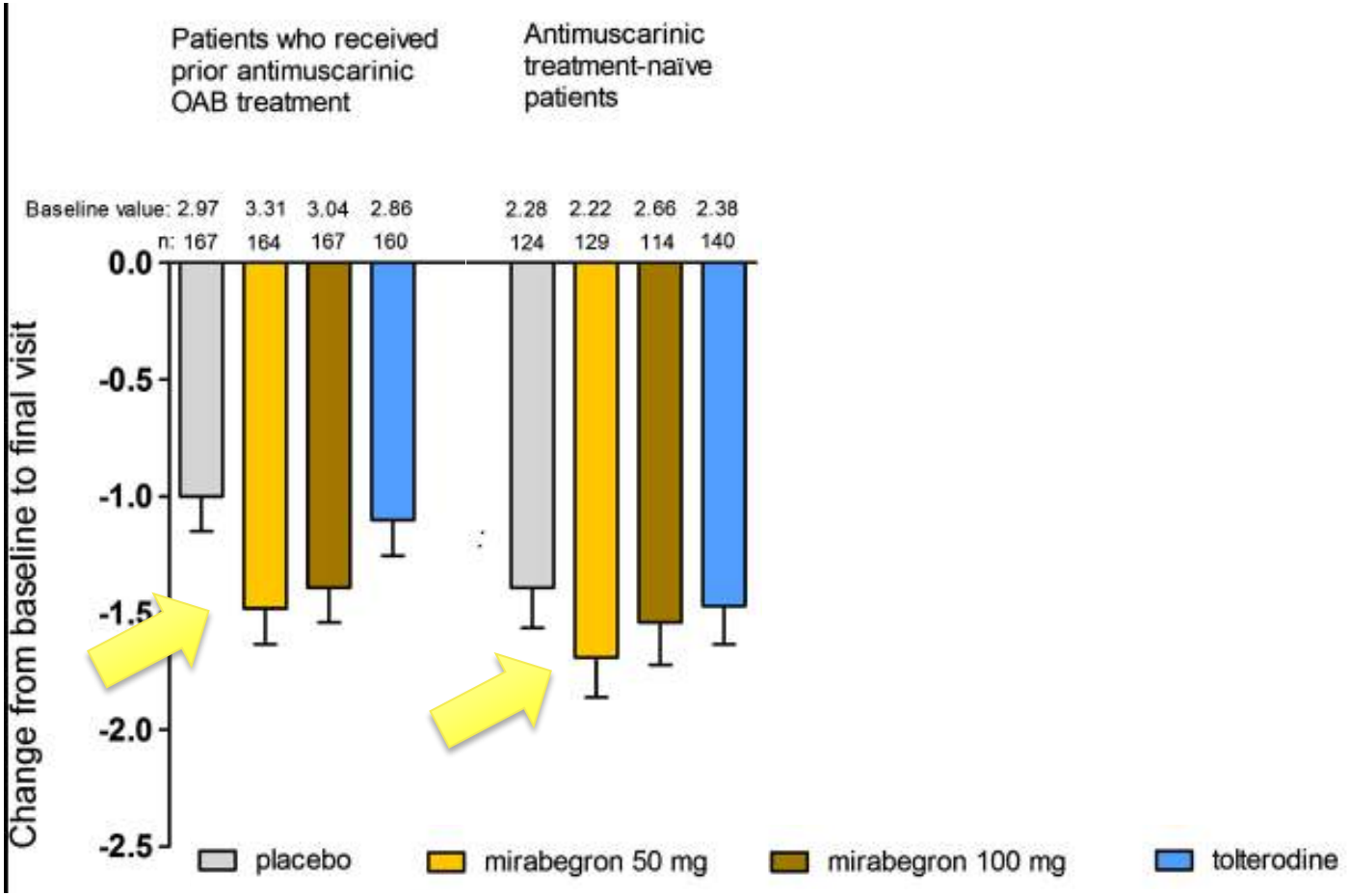
NICE technology appraisal guidance [TA290] Published date: 26 June 2013

You should be able to have mirabegron if drugs called 'antimuscarinics' do not work, if they are not suitable for you, or their side effects are unacceptable

Beta3Agonista

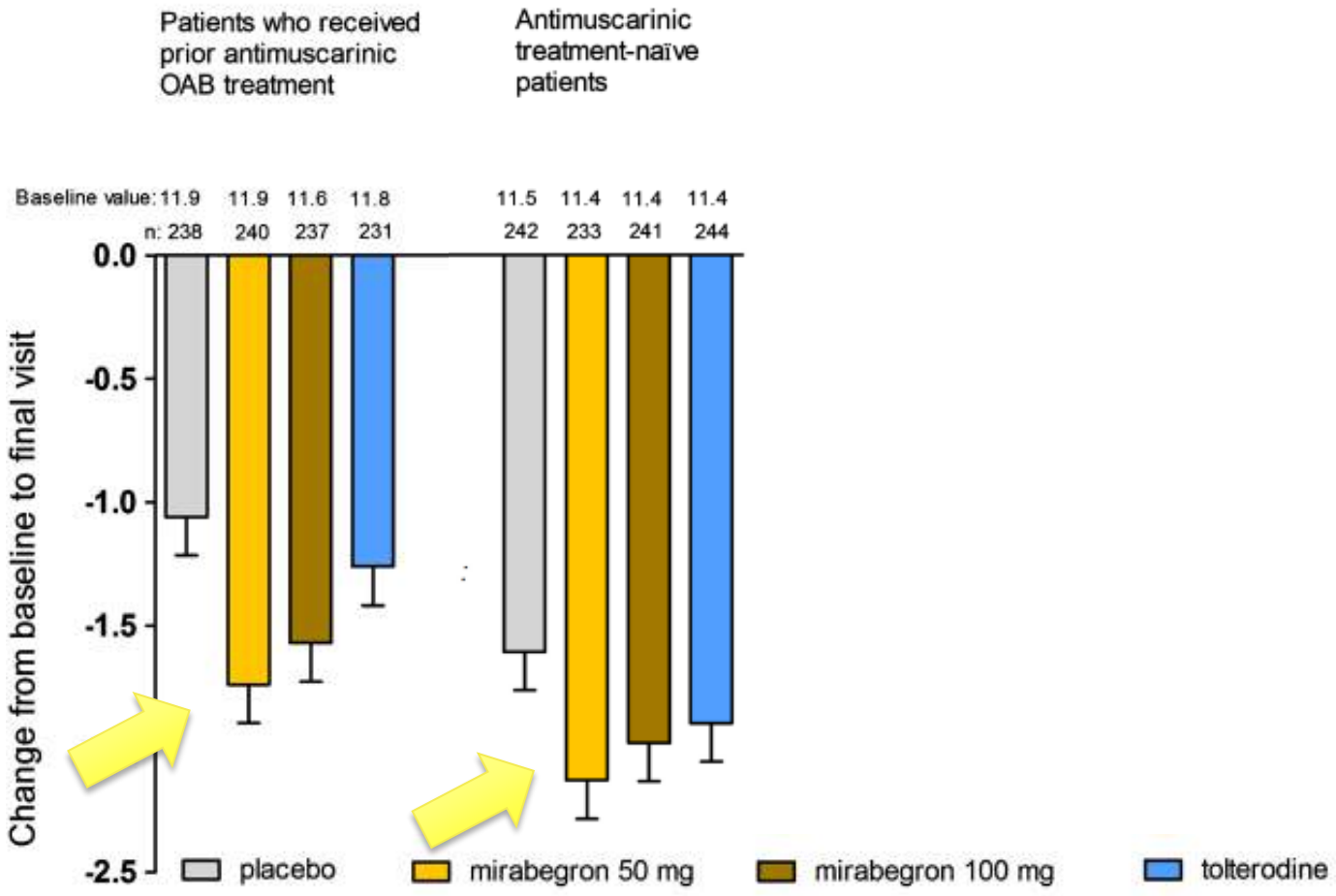
- Funziona meglio in pazienti non responder a antimuscarinici?

Prima o seconda linea di terapia?
Mean number of UI episodes/24 h



Khullar V et al. BMC Urology 2013, 13:45

Prima o seconda linea di terapia?
Mean number of micturitions/24 h



Seconda linea di trattamento?

Beta3Agonista

- Funziona in pazienti non responder a antimuscarinici?

Effect of mirabegron on patients with refractory OAB and on the waiting list for onabotulinumtoxinA (onabotA)

Watcyn-Jones T. Eur Urol Suppl 2014;13(1):e704

- Single-centre study (mean FU 55d)
- N=36 pts with refractory OAB and proven DO
  - 6 males, 30 females (mean age 60 yr) – 86% have UUI
  - on the waiting list for first/repeat onabotA therapy
  - received mirabegron 50 mg od
- Response rate of mirabegron: 67% (24/36 pts)
  - ICIQ-SF score: 13.36 → 9.41 (*P*=0.005)
  - 16/24 pts (67%) wanted to be removed from the waiting list, after 2 wk
- 13 of 36 pts (36%) with ≥1 prior onabotA treatment:
  - 7 wanted to be removed from waiting list, after 2 wk
- AEs:
  - palpitations (2), vomiting (1), rashes (1), lethargy (1), yellow urine (1)

Patients with refractory OAB seem to respond well to mirabegron. About one third are willing to be removed from the waiting list for onabotA injections

ICIQ-SF: Incontinence Questionnaire-Short Form

Beta3Agonista

EUROPEAN UROLOGY XXX (2016) XXX–XXX

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

European Association of Urology

Platinum Priority – Voiding Dysfunction

Editorial by XXX on pp. x–y of this issue

Efficacy and Safety of Mirabegron Add-on Therapy to Solifenacin in Incontinent Overactive Bladder Patients with an Inadequate Response to Initial 4-Week Solifenacin Monotherapy: A Randomised Double-blind Multicentre Phase 3B Study (BESIDE)

Marcus J. Drake[a,], Christopher Chapple[b], Ahmet A. Esen[c], Stavros Athanasiou[d], Javier Cambronero[e], David Mitcheson[f], Sender Herschorn[g], Tahir Saleem[h], Moses Huang[h], Emad Siddiqui[h], Matthias Stölzel[i], Claire Herholdt[h], Scott MacDiarmid[j], on behalf of the BESIDE study investigators*

Beta3Agonista

- Combination > Solifenacin 5 mg
- Combination <> Solifenacin 10 mg (with less side effects)

EUROPEAN UROLOGY XXX (2016) XXX–XXX

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Beta3Agonista

- Funziona in pazienti non responder a antimuscarinici?

SÌ...

E anche in combinazione!

American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults (2012)

Drugs with strong anticholinergic properties

Antihistamines

- Brompheniramine
- Carbinoxamine
- Chlorpheniramine
- Clemastine
- Cyproheptadine
- Dimenhydrinate
- Diphenhydramine
- Hydroxyzine
- Loratadine
- Meclizine

Antiparkinson agents

- Benztropine
- Trihexyphenidyl

Skeletal muscle relaxants

- Carisoprodol
- Cyclobenzaprine
- Orphenadrine
- Tizanidine

Antidepressants

- Amitriptyline
- Amoxapine
- Clomipramine
- Desipramine
- Doxepin
- Imipramine
- Nortriptyline
- Paroxetine
- Protriptyline
- Trimipramine

Antipsychotics

- Chlorpromazine
- Clozapine
- Fluphenazine
- Loxapine
- Olanzapine
- Perphenazine
- Pimozide
- Prochlorperazine
- Promethazine
- Thioridazine
- Thiothixene
- Trifluoperazine

Antimuscarinics (urinary incontinence)

- Darifenacin
- Fesoterodine
- Flavoxate
- Oxybutynin
- Solifenacin
- Tolterodine
- Trospium

Antispasmodics

- Atropine products
- Belladonna alkaloids
- Dicyclomine
- Homatropine
- Hyoscyamine products
- Propantheline
- Scopolamine

Age and Ageing 2014; **43:** 666–675
doi: 10.1093/ageing/afu017
Published electronically 6 March 2014

The efficacy and tolerability of the β3-adrenoceptor agonist mirabegron for the treatment of symptoms of overactive bladder in older patients

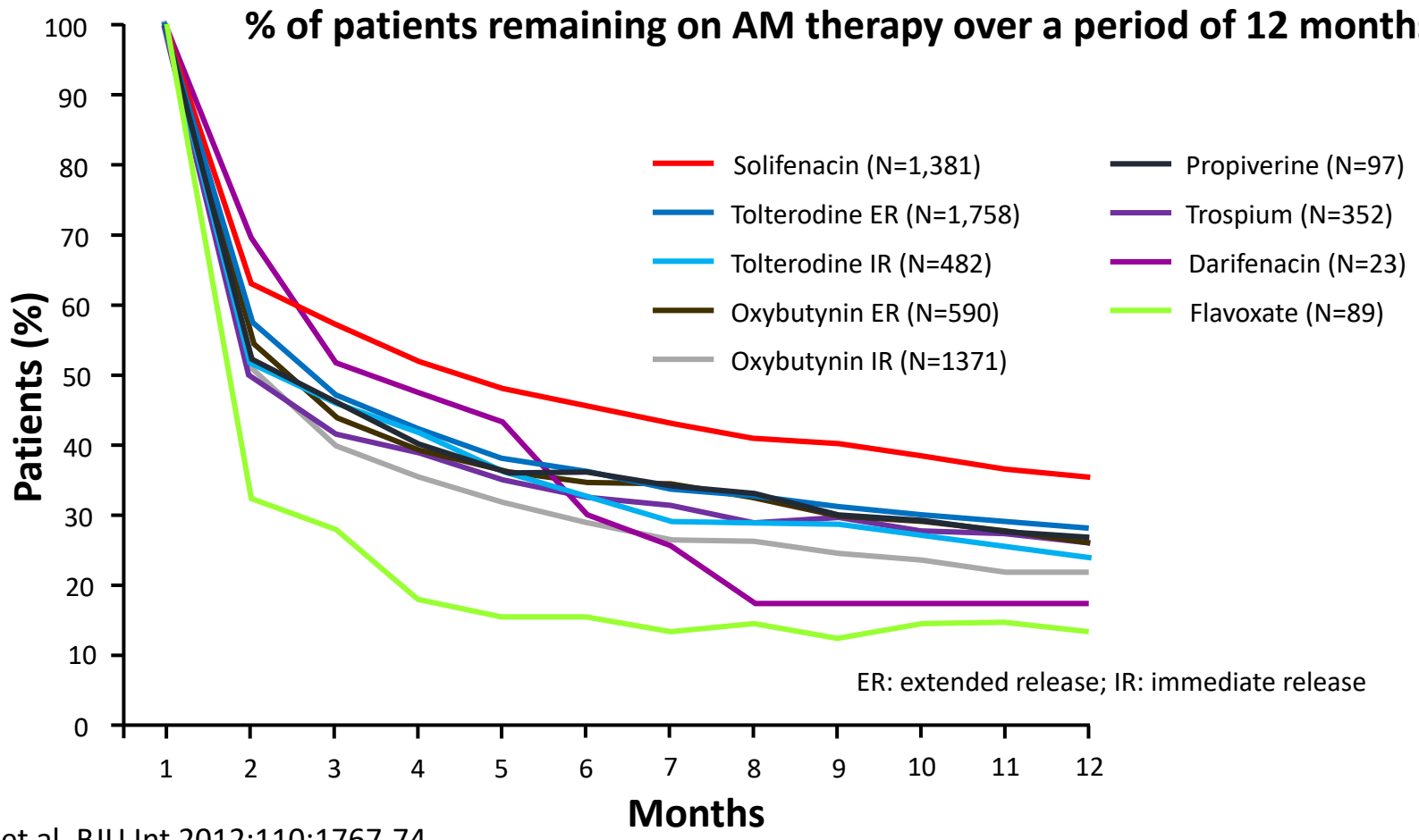
ADRIAN WAGG[1], LINDA CARDOZO[2], VICTOR W. NITTI[3], DAVID CASTRO-DIAZ[4], STEPHEN AUERBACH[5], MARY BETH BLAUWET[6], EMAD SIDDIQUI[7]

[1]Department of Geriatric Medicine, University of Alberta, Alberta, Canada
[2]Department of Urogynaecology, Kings College London, London, UK
[3]Department of Urology, NYU Langone Medical Center, New York City, NY, USA
[4]Department of Urology, University Hospital of the Canary Islands, Santa Cruz de Tenerife, Tenerife, Spain
[5]Department of Urology, Hoag Memorial Presbyterian Hospital, Newport Beach, Long Beach, CA, USA
[6]Department of Biostatistics, Astellas Pharma Global Development, Inc., Northbrook, IL, USA
[7]Astellas Pharma Europe Ltd, Chertsey, Surrey, UK and Department of Urology, Ealing Hospital, London, UK

Address correspondence to: A. Wagg. Tel: +1 780 492 5338; Fax: +1 780 492 2784. Email: adrian.wagg@ualberta.ca

Persistence with antimuscarinic agents is poor

- 12-month UK study on prescription data

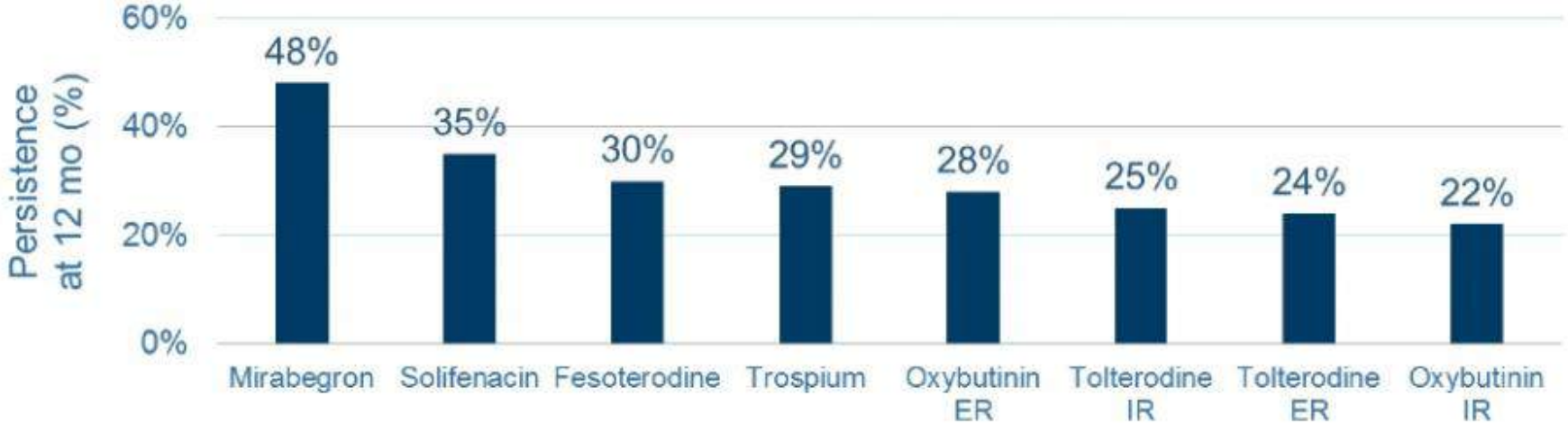


Wagg A et al. BJU Int 2012;110:1767-74

Persistence with mirabegron vs antimuscarinics in OAB

Wagg A. Eur Urol Suppl 2015;14(2):e267

- Analysis of prescription data from a UK longitudinal database: pts starting a new course of OAB therapy (2012-2013) and followed for 12 mo
  - N=10,238 pts receiving antimuscarinics; N=141 pts receiving mirabegron
- Treatment cessation = discontinuation of treatment >1.5 times the expected duration of the previous prescription, including switching to other drug
- Mirabegron had a higher persistence than antimuscarinics at 12 mo:



Mirabegron seems to have a higher persistence rate at 12 mo than antimuscarinics in pts starting a new course of OAB treatment

Data from poster

Out of pocket…

FARMACI PER L'INCONTINENZA URINARIA

SOTTOGRUPPO «FARMACI» DEL GRUPPO DI LAVORO SUI PROBLEMI LEGATI ALL'INCONTINENZA URINARIA E FECALE (D.M. DEL 2 OTTOBRE 2015)

Specialized Management of Urinary Incontinence in Women

HISTORY/ SYMPTOM ASSESSMENT

- Incontinence on physical activity
- Incontinence with mixed symptoms
- Incontinence with urgency / frequency

"Complicated" incontinence:

- Recurrent incontinence
- Incontinence associated with:
  - Pain
  - Hematuria
  - Recurrent infection
  - Voiding symptoms
  - Pelvic irradiation
  - Radical pelvic surgery
  - Suspected fistula

CLINICAL ASSESSMENT

- Assess for pelvic organ mobility / prolapse
- Consider imaging of the UT/ pelvic floor
- Urodynamics (see notes)

DIAGNOSIS

- URODYNAMIC STRESS INCONTINENCE (USI)
- MIXED INCONTINENCE (USI/DOI) (Treat. most bother-some symptom first)
- DETRUSOR OVERACTIVITY INCONTINENCE (DOI)
- INCONTINENCE associated with poor bladder emptying
  - *Bladder outlet obstruction*
  - *Underactive detrusor*

Consider:

- Urethrocystoscopy
- Further imaging
- Urodynamics

Lower urinary tract anomaly / pathology

TREATMENT

If initial therapy fails :

- Stress incontinence surgery
  - bulking agents
  - tapes and slings
  - colposuspension

If initial therapy fails :

- Botulinum toxin
- Neuromodulation
- Bladder augmentation

- Correct anatomic bladder outlet obstruction (e.g. genito-urinary prolapse)
- Intermittent catheterization

- Correct anomaly
- Treat pathology

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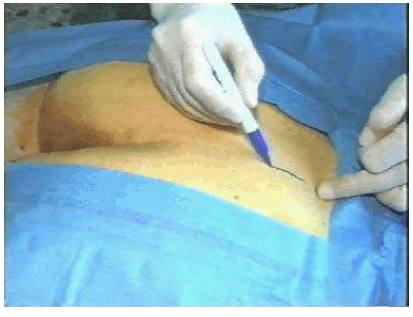
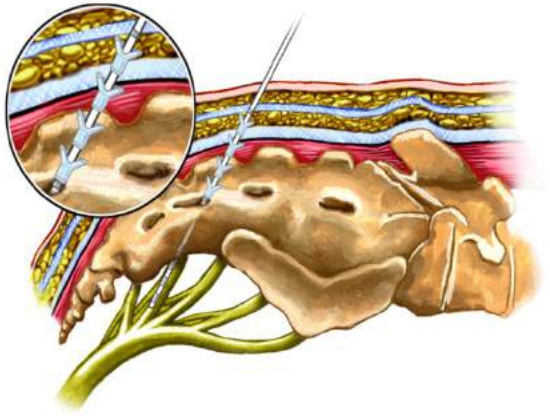
- Treat pathology

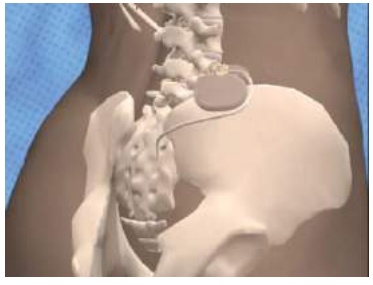
Neuromodulazione sacrale

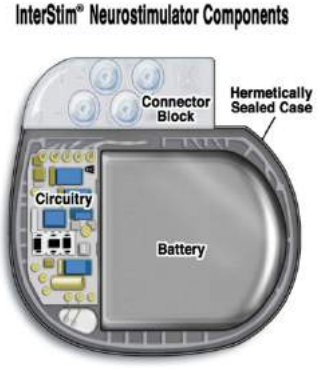
Procedure chirurgiche: neuromodulazione sacrale

- Neuromodulazione sacrale
  - Il meccanismo d'azione rimane dibattuto[1]
  - Almeno due meccanismi potenziali:[1]
    - Attivazione delle fibre efferenti che arrivano allo sfintere uretrale striato che di riflesso causa il rilassamento del detrusore (secondo Tanagho & Schmidt 1988[2])
    - Attivazione delle fibre afferenti che causa l'inibizione a livello spinale o sopraspinale (secondo Fowler et al 2000[2])









1. Groen J, Bosch JLHR. *BJU Int* 2001;87:723–31
2. Tanagho EA, Schmidt RA. *J Urol* 1988;140:1331–9.
3. Fowler CJ, et al. *J Urol* 2000;163:881–3.

Herbison GP: Cochrane Database Syst Rev. 2009

- Eight reports of randomised studies that evaluated implants which provided continuous stimulation were included.
- It seems clear that continuous stimulation offers benefits for carefully selected people with overactive bladder syndrome and for those with urinary retention.

SNM for OAB

Table 5. Short-term results of treatment with SNM or with placebo among patients with OAB

First author	Follow-up, months	General improvement, %	Voids/day, %	Voided vol., %	IE/day, %	Proportion of group with 100% continence, %	Pads/day, %	MCC, %
Weil [36]	6				–90	56	–92	39
Schmidt [35]	6				–73	47	–82	
Hassouna [40]	12	88	–46	77				
van Kerrebroeck [43]	49		–23	79	–56		–64	
van Voskuilen [44]	64.2	64						
Sutherland [42]	22	69	–35		–88	50	–100	
van Voskuilen [45]	15.5	80	–38	44	–65			
Hijaz [41]	16	75						

Leong, De Wachter, van Kerrebroeck - Urol Int 2010;84:245–253

Percutaneous Tibial Nerve Stimulation PTNS

- Neuromodulation technique of the lower urinary tract obtained with electrical stimulation of the posterior tibial nerve

PTNS: procedura

- Trattamento ambulatoriale
- Una seduta di stimolazione a settimana
- 30 minuti
- Periodo di valutazione: 12 settimane

Percutaneous Tibial Nerve Stimulation Effects on Detrusor Overactivity Incontinence are Not Due to a Placebo Effect: A Randomized, Double-Blind, Placebo Controlled Trial

Enrico Finazzi-Agrò,*,† Filomena Petta, Francesco Sciobica, Patrizio Pasqualetti, Stefania Musco and Pierluigi Bove

From the Department of Surgery/Urology, Tor Vergata University (EFA, FP, FS, PB), SeSMIT, Service for Medical Statistics and Information Technology, AFaR, Fatebenefratelli Hospital, Isola Tiberina (PP) and Fondazione S. Lucia (SM), Rome, Italy

North Carolina (SAM)

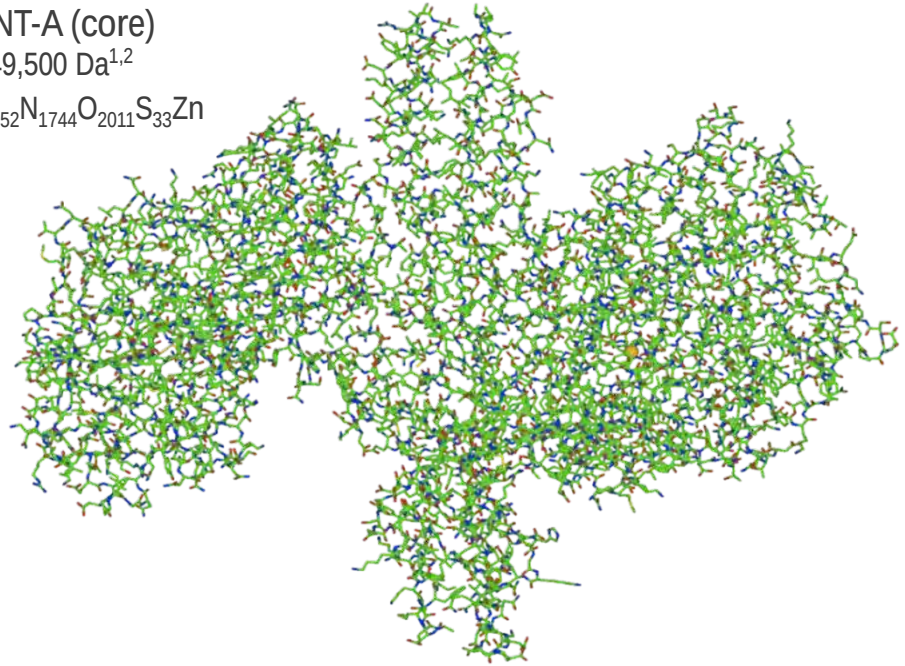
Guidelines on Urinary Incontinence

M.G. Lucas, J.L.H.R. Bosch, F.R. Cruz, T.B. Madden,
A. Nambiar, A. Neisius, R.S. Pickard, D.J.M.K. de Ridder,
A. Tubaro, W.H. Turner

Offer, if available, PTNS as an option for improvement of urgency urinary incontinence in women, but not men, who have not benefited from antimuscarinic medication.

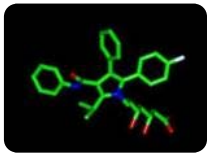
Tossina botulinica di tipo A: una grande proteina tridimensionale

BoNT-A (core)
149,500 Da[1,2]
$C_{6763}H_{10452}N_{1744}O_{2011}S_{33}Zn$

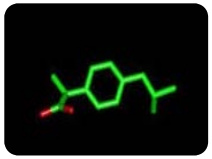


Composto	MW
Aspirina (acido acetilsalicilico)	180 Da[3]
Uraplex® (cloruro di trospio)	430 Da[3]
Omnic® (tamsulosina)	445 Da[3]
Viagra® (citrato di sildenafil)	667 Da[3]
Complesso BOTOX® (tossina botulinica di tipo A)	~900,000 Da[4]

Lipitor® (Atorvastatina)[3]
559 Da
$C_{33}H_{35}FN_2O_5$



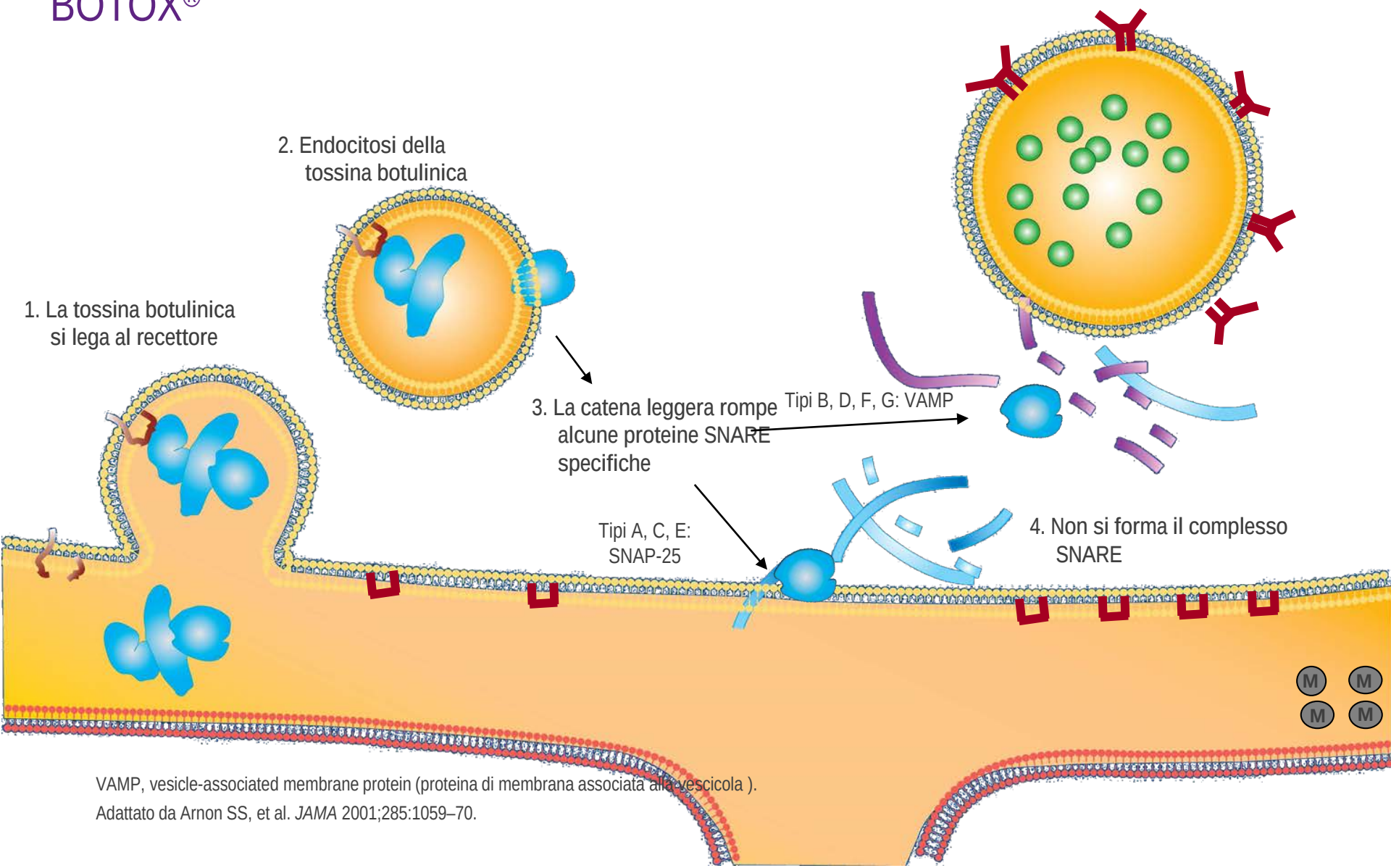
Ibuprofene[3]
206 Da
$C_{13}H_{18}O_2$



BoNT-A, Tossina botulinica di tipo A; MW, peso molecolare.

1. Lacy DB, et al. *Nat Struct Biol* 1998;5:898–902.
2. Lacy DB, Stevens RC. *J Mol Biol* 1999;291:1091–104.
3. DrugBank. Disponibile su http://www.drugbank.ca/drugs/DB01076. Ultimo accesso Febbraio 2013.
4. Schantz EJ, Johnson EA. *Perspect Biol Med* 1997;40:317–27.

L'inibizione dell'interazione tra le vescicole sinaptiche e le membrane del terminale nervoso è fondamentale per l'azione motoria e sensoriale di BOTOX®



VAMP, vesicle-associated membrane protein (proteina di membrana associata alla vescicola).

Adattato da Arnon SS, et al. *JAMA* 2001;285:1059–70.

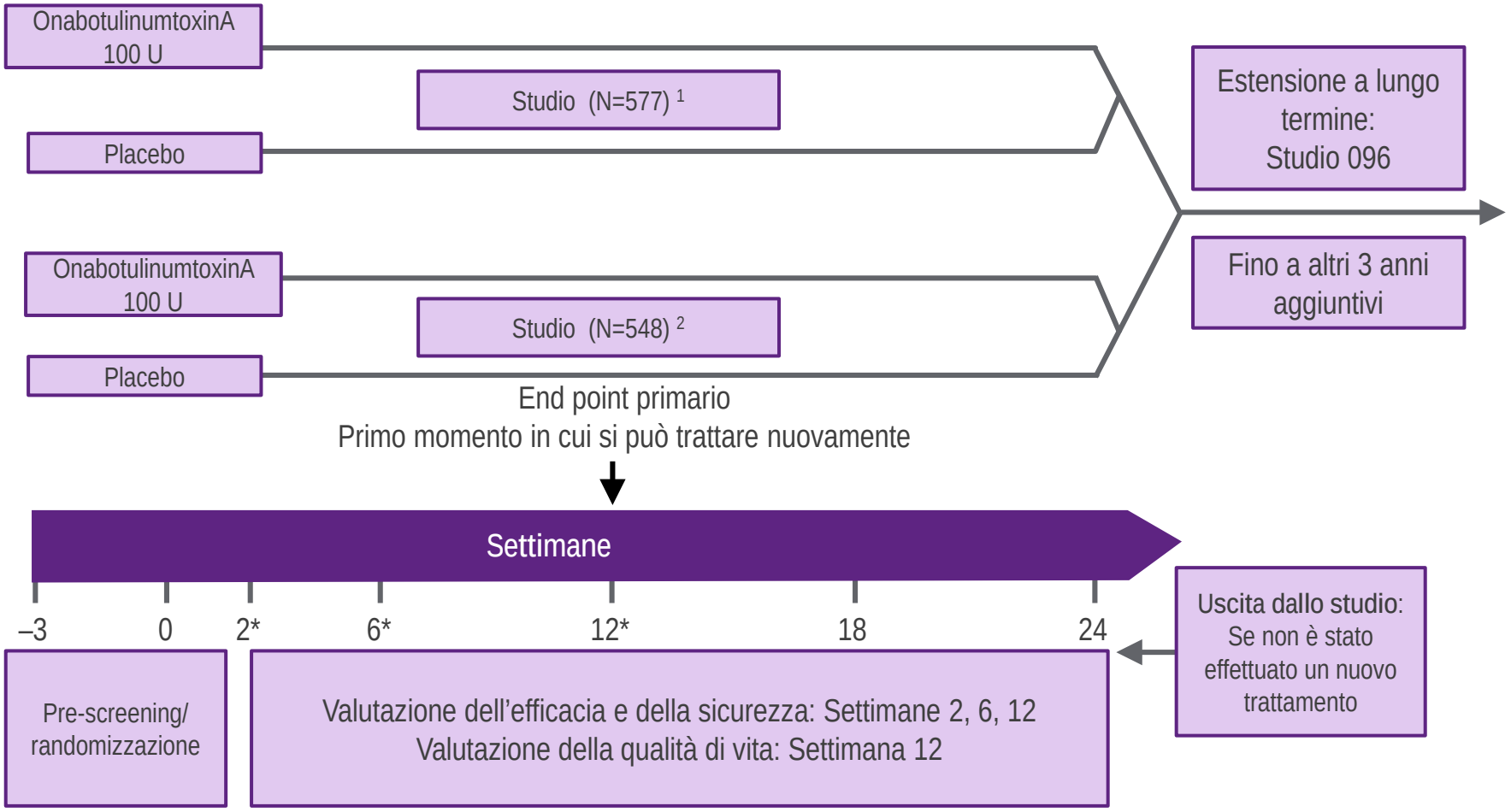
Linee guida che consigliano le iniezioni di tossina botulinica per l'incontinenza neurogena (Grado A)

Linee guida	Livello d'evidenza/Grado di raccomandazione
ICI guidelines 2013 (tossina botulinica [*neurogena*], iniettata nel detrusore)[1]	1A
EAU guidelines 2009 (disfunzione neurogena del basso tratto urinario)[2]	1 A
EAU guidelines 2011 (disfunzione neurogena del basso tratto urinario)[3]	A
EAU guidelines 2011 (incontinenza urinaria)[3]	2 A (neurogena)

EAU, European Association of Urology; ICI, International Continence Society.

1. Abrams P, et al. eds. From the 5th ICI; Health Publication Ltd; 2013.
2. Stöhrer M. European Association of Urology. Guidelines on neurogenic lower urinary tract dysfunction. 2009. Disponibile su http://www.uroweb.org/fileadmin/tx_eauguidelines/2008/Full/Neurogenic_LUTS.pdf. Ultimo accesso Giugno 2011.
3. Pannek J. European Association of Urology. Guidelines on neurogenic lower urinary tract dysfunction. 2011. Disponibile su http://www.uroweb.org/gls/pdf/17_Neurogenic%20LUTS.pdf. Ultimo accesso Giugno 2011.

EMBARK: due studi pivotali di fase III[1,2]

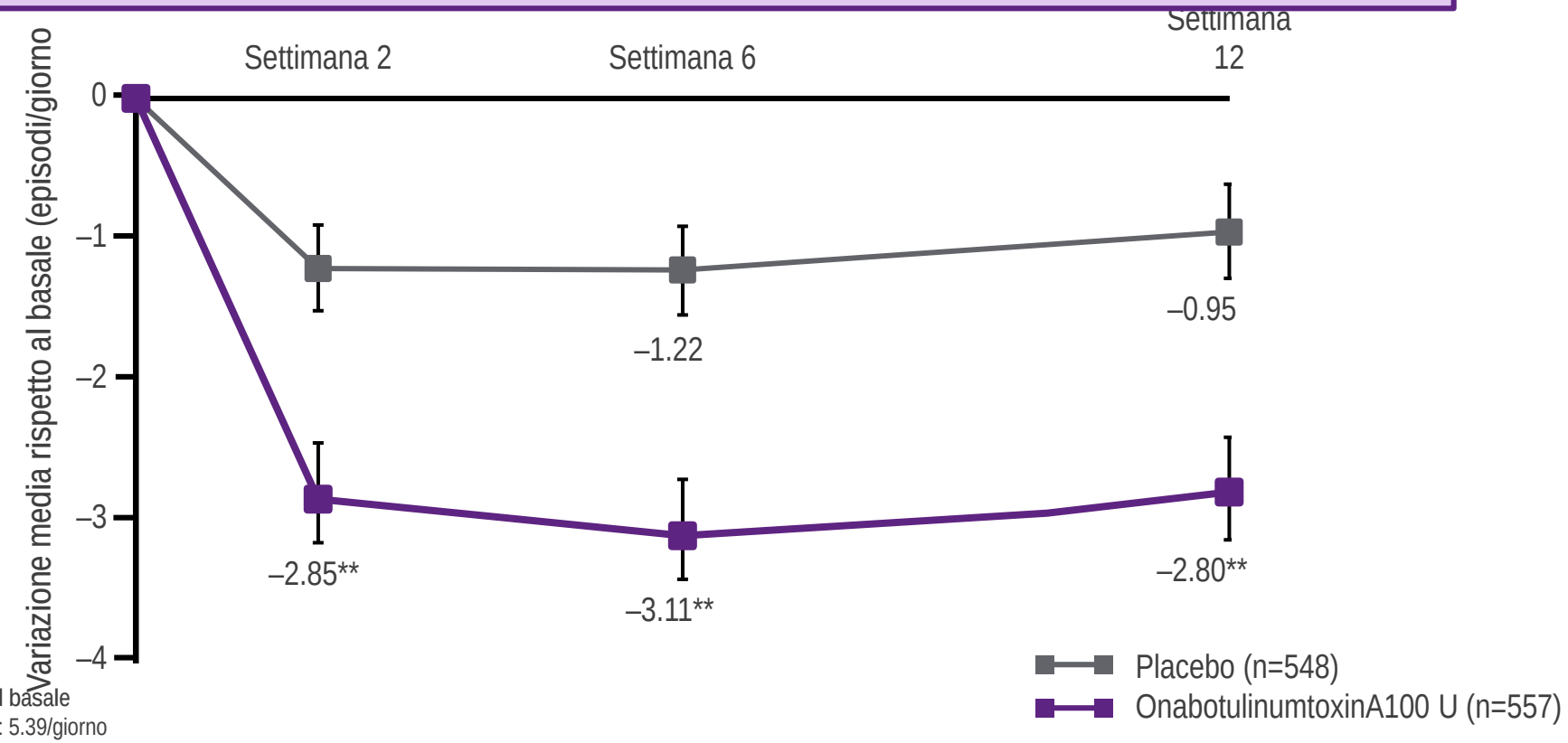


*Periodo di confronto placebo-controllo.

1. Nitti etal_JUrol_2013
2. Chapple et al EurUrol2013

Diminuzione significativa degli episodi d'incontinenza urinaria giornaliera rispetto al placebo

Alla 12^ settimana, OnabotulinumtoxinA consentiva di ottenere il 51% di riduzione degli episodi di UI rispetto al basale contro il 18% col placebo (P<0.001)



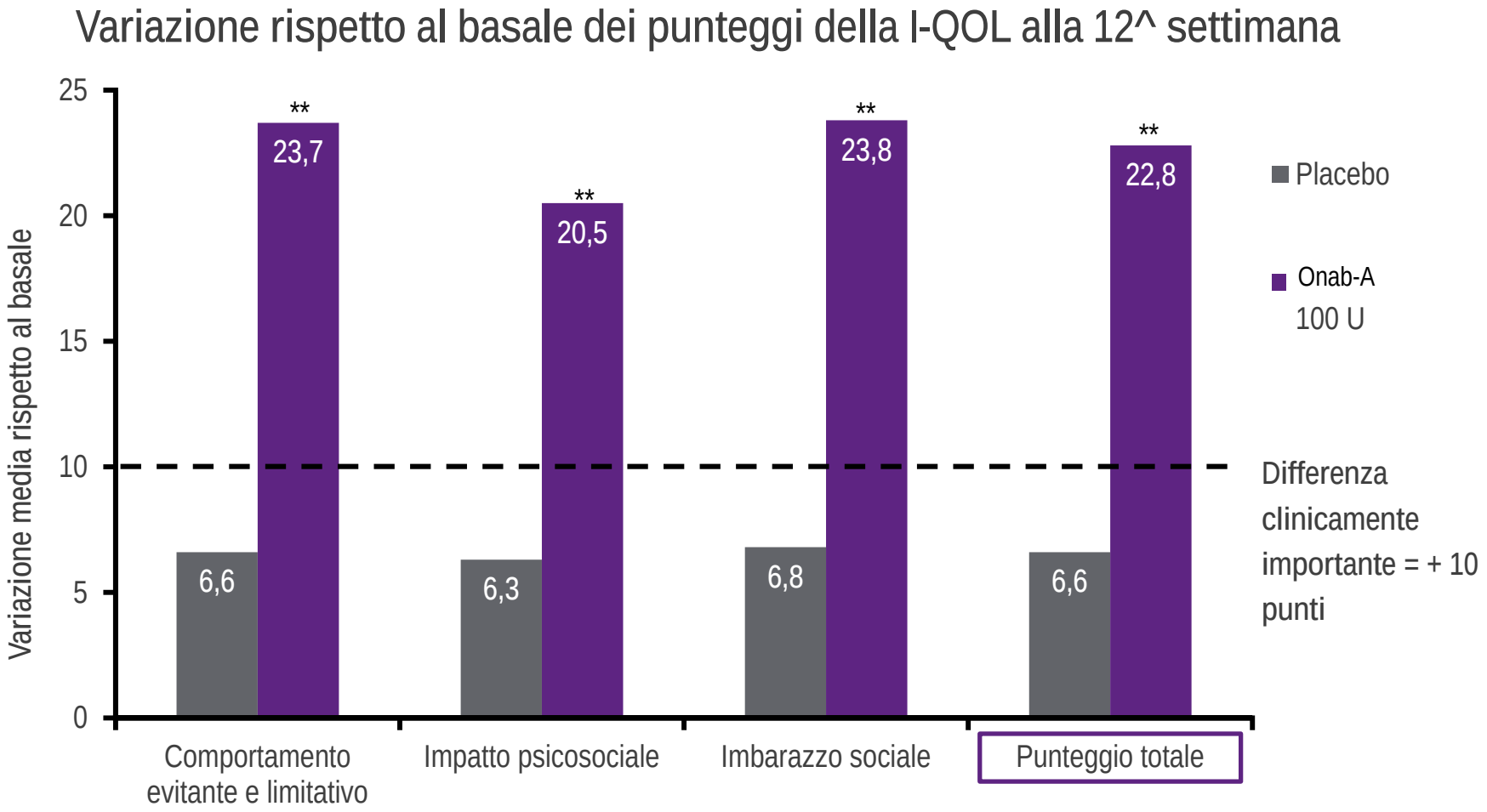
Valori al basale
Placebo: 5.39/giorno
OnabotulinumtoxinA100 U: 5.49/giorno

**p<0.001 vs. placebo.

UI, incontinenza urinaria.

1. Adattato da Nitti et al_JUrol_2013 2. Chapple, EurUrol 2013

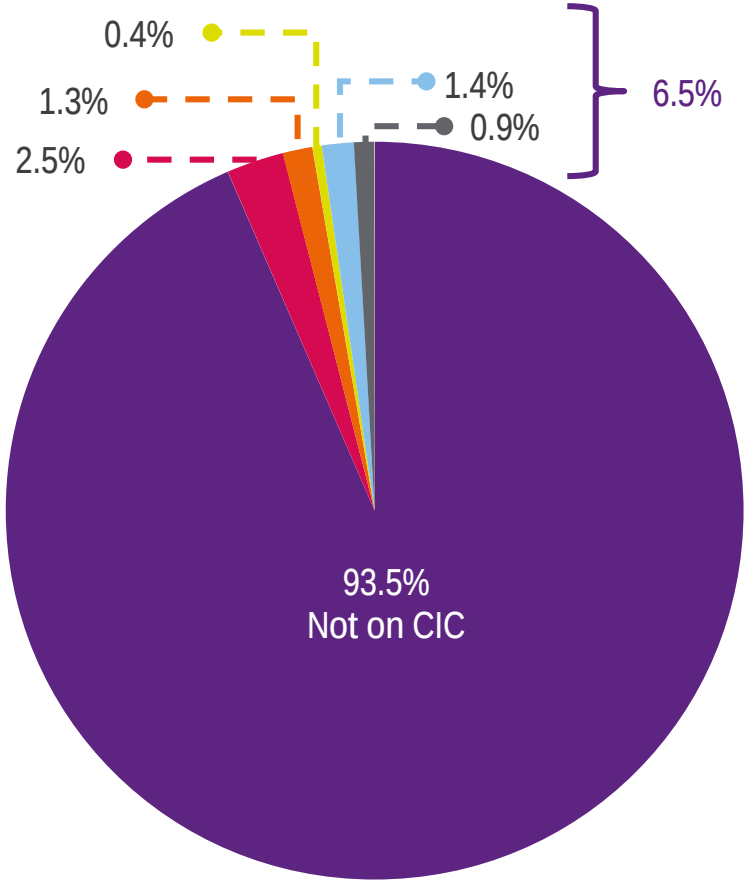
Miglioramenti clinicamente significativi in tutti i domini della I-QOL



**p<0.0001 vs. placebo.
I-QOL, Questionario sulla qualità della vita specifico per l'incontinenza ..

Adattato da Nitti W et Al 2012 J of Urology
Chapple C, et al, European Urology, 2013

La maggioranza dei pazienti non aveva bisogno del CIC



CIC = 6.5% (36/552 pazienti)*

% dei pazienti

- Non ha iniziato il CIC
- Ha usato il CIC ≤6 settimane
- Ha usato il CIC >6 e ≤12 settimane
- Ha usato il CIC >12 e ≤18 settimane
- Ha usato il CIC >18 e ≤24 settimane
- Ha usato il CIC >24 settimane

Le percentuali del CIC sono basse e principalmente transitorie

*Pazienti che hanno avuto bisogno del CIC in qualsiasi momento durante il 1°ciclo di trattamento.
CIC, cateterismo intermittente pulito.

Nitti W et Al 2012 J of Urology
Chapple C, et al, European Urology, 201

Il tempo medio per la richiesta di un nuovo trattamento da parte del paziente è ~6 mesi

Il tempo medio della durata della risposta dopo inoculo di OnabotulinumtoxinA in base alla richiesta del paziente di un nuovo trattamento, era di 166 giorni (~24 settimane)

Adattato da Nitti et al, JUrol2013 2. Chapple, EurUrol 2013

.

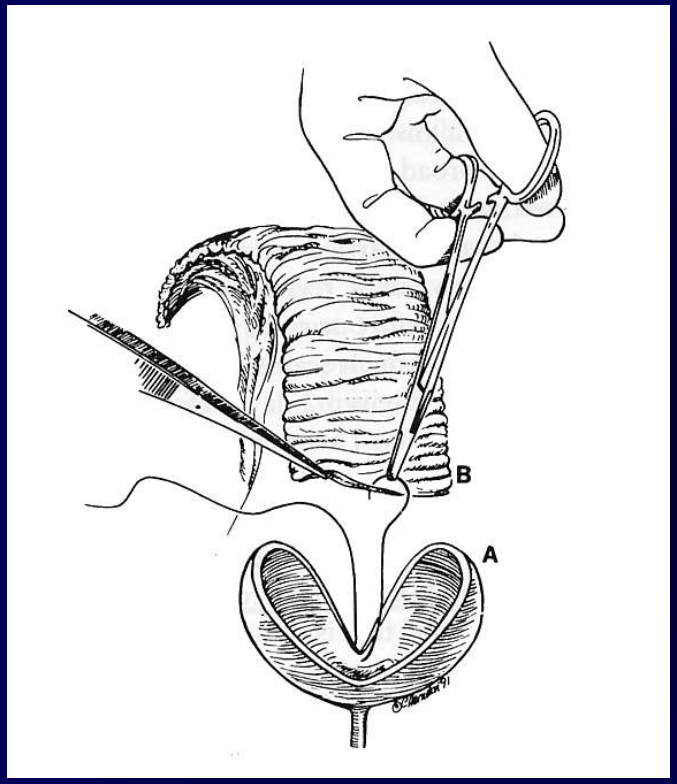
Gestione dell'incontinenza urinaria: Linee guida EAU 2013[1]

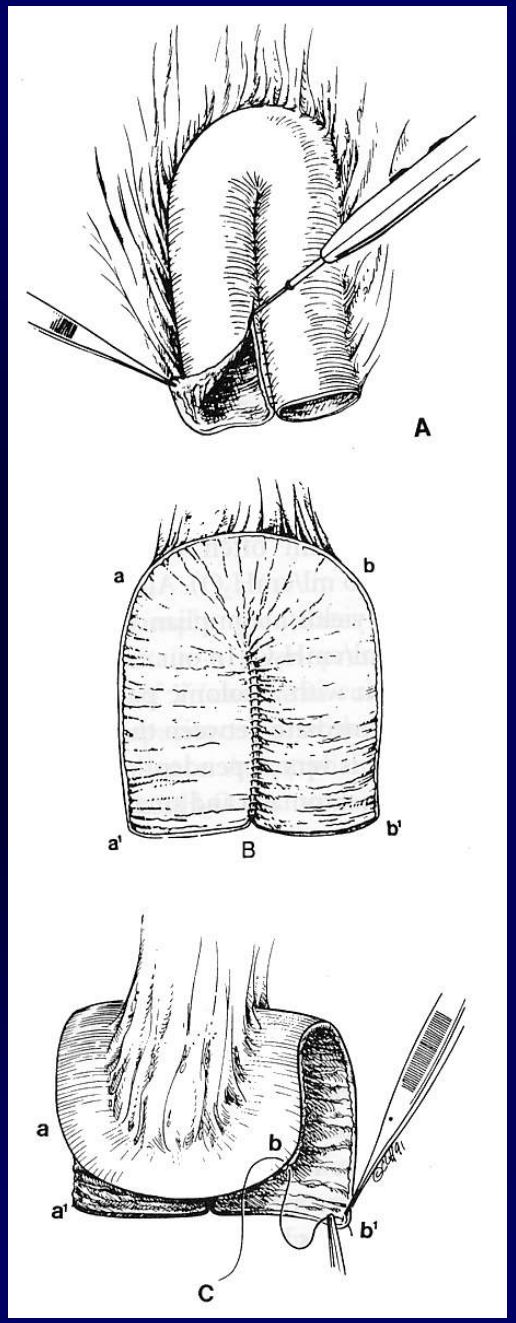
Tossina botulinica di tipo A (intravescicale; 100–300 U)
Proporre iniezioni intravescicali di tossina botulinica di tipo A ai pazienti affetti da incontinenza urinaria refrattari alla terapia antimuscarinica (A*)
Avvertire i pazienti della durata limitata della risposta, del possibile prolungato bisogno di auto-cateterismo (verificare che siano disposti e capaci di farlo), e del rischio di infezioni delle vie urinarie (A*)
Inoltre, i pazienti devono essere informati dello stato di autorizzazione della tossina botulinica di tipo A, e che gli effetti negativi a lungo termine, anche se improbabili, rimangono incerti (A*)

* Raccomandazione EAU di Grado A: In base a studi clinici di buona qualità e la consistenza riguardo le raccomandazioni specifiche e che includono almeno uno studio clinico randomizzato
EAU, European Association of Urology.

1. Lucas MG, et al. EAU guidelines on urinary incontinence. 2013.

ILEOCYSTOPLASTY





Specialized Management of Urinary Incontinence in Women

HISTORY/ SYMPTOM ASSESSMENT

Incontinence on physical activity

Incontinence with mixed symptoms

Incontinence with urgency / frequency

"Complicated" incontinence:
- Recurrent incontinence
- Incontinence associated with:
- Pain
- Hematuria
- Recurrent infection
- Voiding symptoms
- Pelvic irradiation
- Radical pelvic surgery
- Suspected fistula

CLINICAL ASSESSMENT

- Assess for pelvic organ mobility / prolapse
- Consider imaging of the UT/ pelvic floor
- Urodynamics (see notes)

DIAGNOSIS

URODYNAMIC STRESS INCONTINENCE (USI)

MIXED INCONTINENCE (USI/DOI)
(Treat. most bother-some symptom first)

DETRUSOR OVERACTIVITY INCONTINENCE (DOI)

INCONTINENCE associated with poor bladder emptying

Bladder outlet obstruction

Underactive detrusor

Consider:
- Urethrocystoscopy
- Further imaging
- Urodynamics

Lower urinary tract anomaly / pathology

TREATMENT

If initial therapy fails :
- Stress incontinence surgery
  - bulking agents
  - tapes and slings
  - colposuspension

If initial therapy fails :
- Botulinum toxin
- Neuromodulation
- Bladder augmentation

- Correct anatomic bladder outlet obstruction (e.g. genito-urinary prolapse)
- Intermittent catheterization

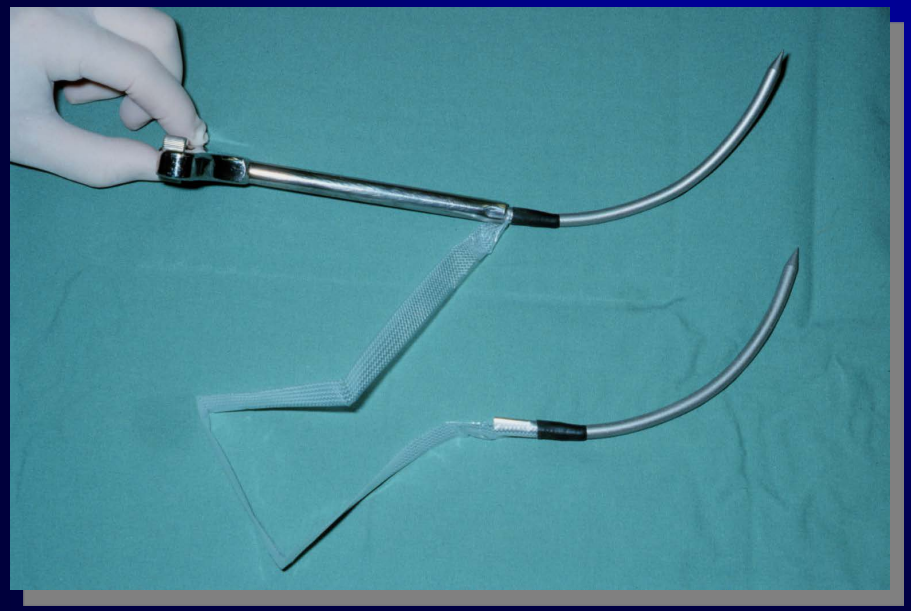
- Correct anomaly
- Treat pathology

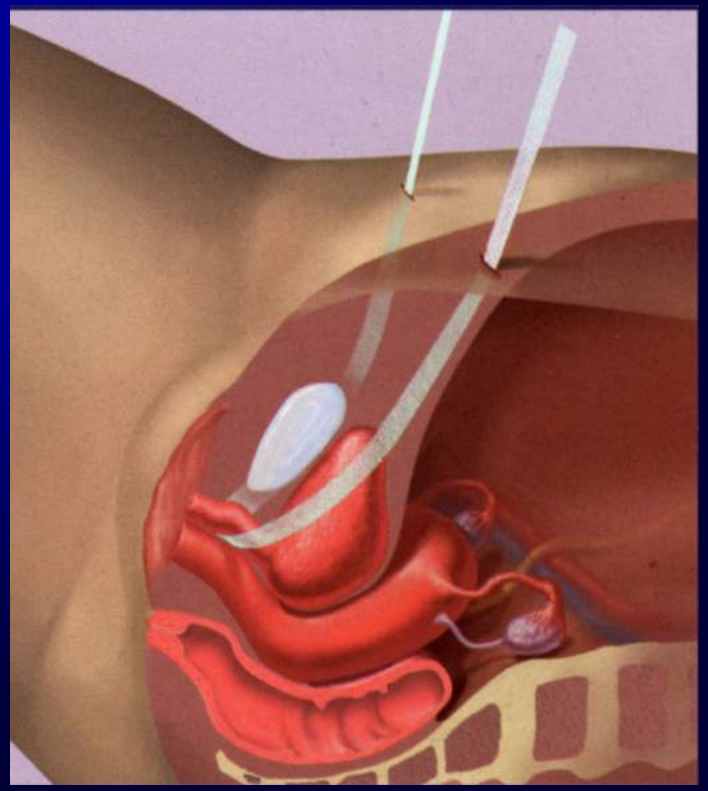
WHAT CAN WE DO IN WOMEN?

Low-tension Mid-Urethral Sling

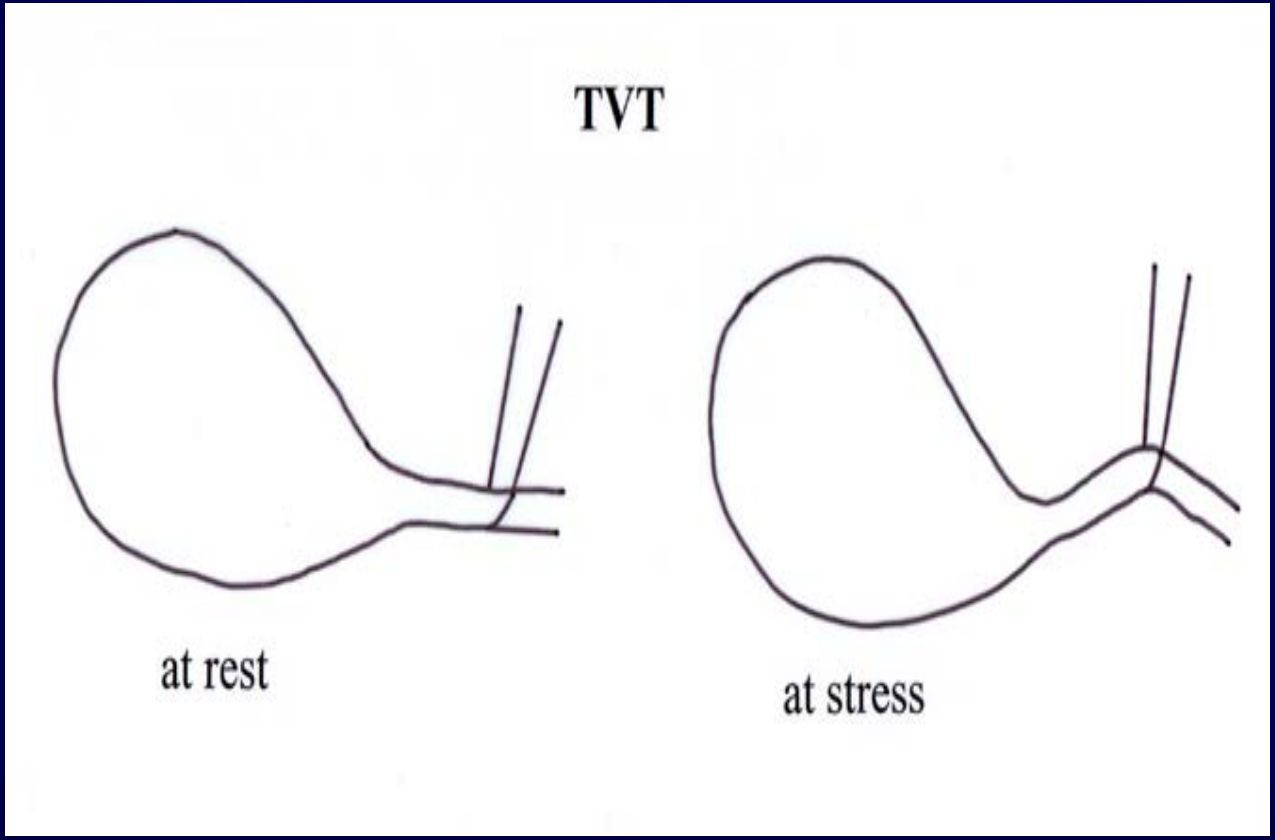
Tension free intravaginal slingplasty

Ulmsten & Petros 1995

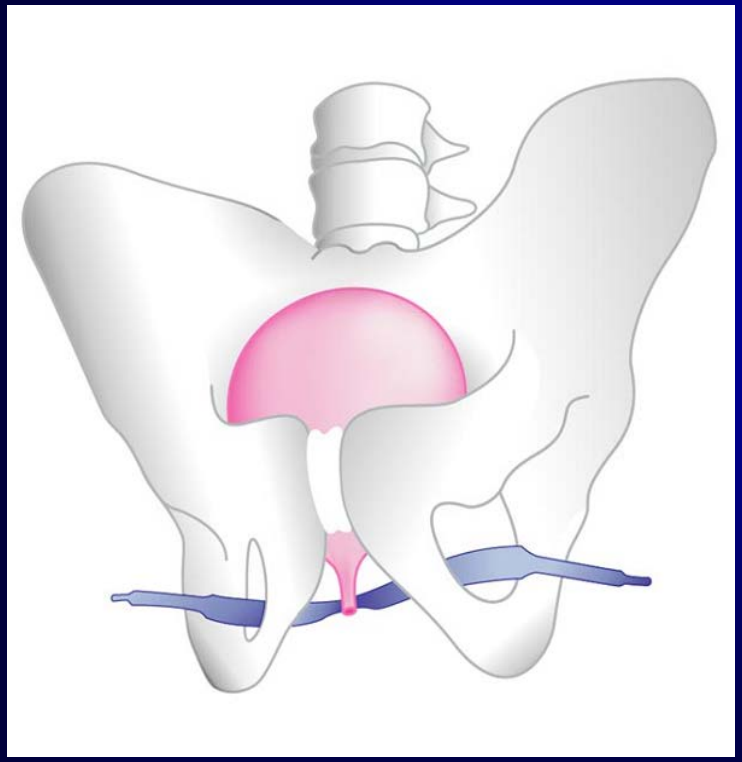




TVT



Low-tension Mid-Urethral Sling



TOT -

TRANSOBTURATOR TAPE

- Tape runs through both obturator foramina
- Cystoscopy not necessary (bladder perforation unlikely)

Delorme 2001

Single-incision mini-sling (SIMS) vs standard midurethral slings (SMUS) for female SUI

Mostafa A. Neurourol Urodyn 2013:32(6):526-8(abs.4)

- Systematic review and meta-analysis of n=25 RCTs including N=3,114 women with SUI (literature search until March 2013)
- SIMS:
  - Mini-Arc: n=6 studies; N=566 women
  - Ajust: n=3 studies; N=350 women
  - Ophira: n=1 study; N=130 women
  - Contasure: n=1 study; N=257 women
  - TFS: n=1 study; N=80 women
  - Solyx: n=1 study; N=30 women
  - TVT-Secur: n= 12 studies; N=1,606 women
- No significant differences between SIMS and SMUS (when excluding TVT-Secur) in patient-reported cure rate and objective cure rate at 12-24 mo FU

RR (95% CI; *P* value)	SIMS vs SMUS	SIMS excl. TVT-Secur vs SMUS
Patient reported cure rate	0.90 (0.85-0.95; *P*=0.0003)	0.96 (0.88-103; *P*=0.26)
Objective cure rate	0.90 (0.84-0.95; *P*=0.0003)	0.97 (0.92-1.02; *P*=0.26)

RR: relative risk; CI: confidence interval

Single-incision mini-sling (SIMS) vs standard midurethral slings (SMUS) for female SUI

Mostafa A. Neurourol Urodyn 2013:32(6):526-8(abs.4)

- SIMS vs SMUS
  - Better operative and peri-operative outcomes
  - Earlier return to normal activities and work

SIMS vs SMUS	WMD (95% CI)
Operative time	-2.04 min (-3.51 to -0.58 min)
Postoperative groin pain	-2.51 (-3.62 to -1.40)

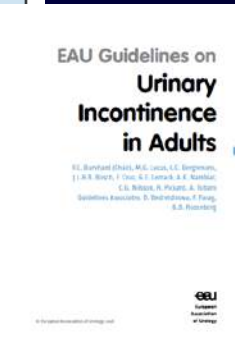
WMD: weighted mean difference; CI: confidence interval

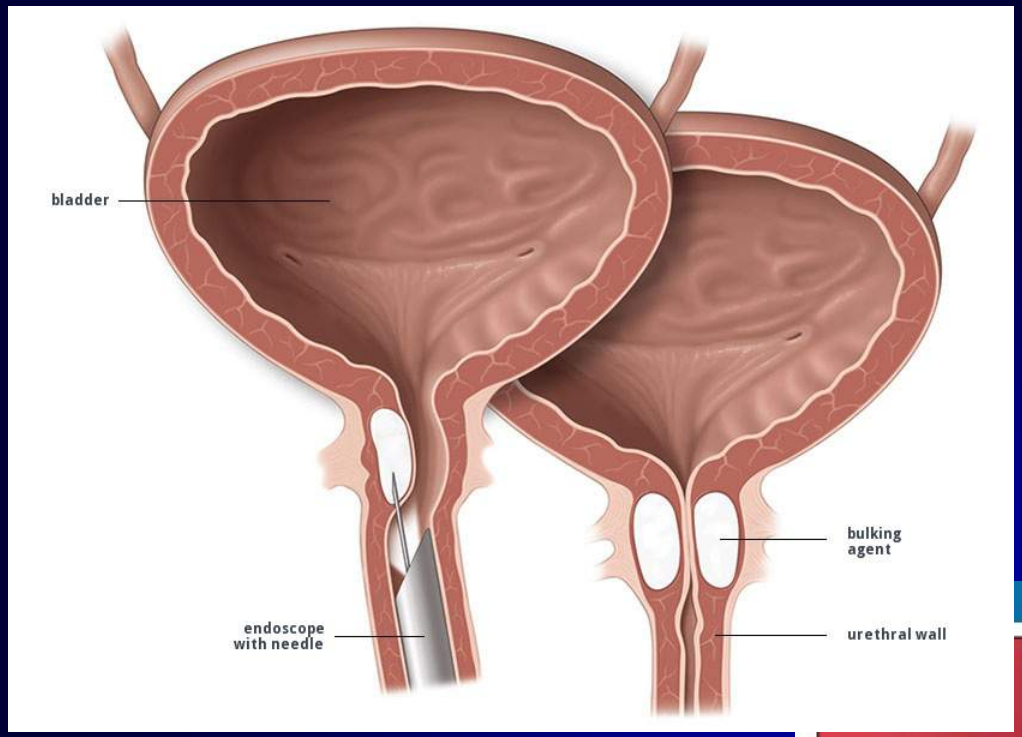
- No difference in lower urinary tract injuries, postoperative voiding difficulties, de-novo urgency/worsening of pre-existing urgency, QoL and sexual function
- Vaginal erosion and repeat continence surgery were significantly higher in the SIMS vs SMUS group but this was mainly due to significant difference in the TVT Secur group

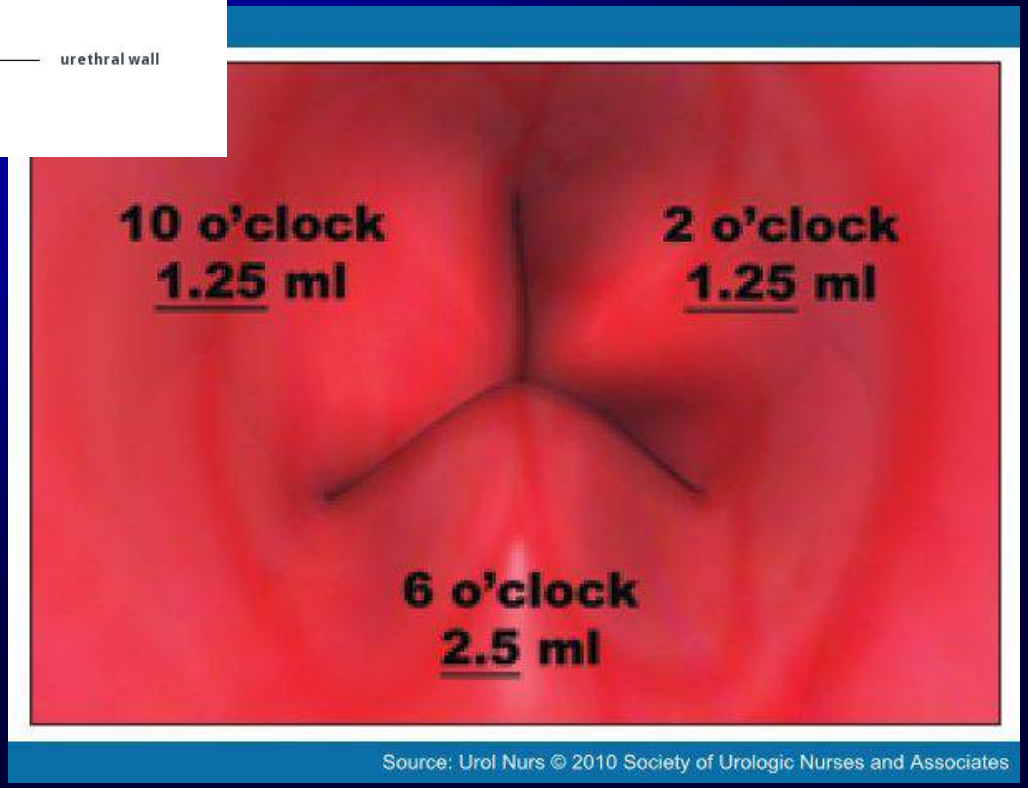
SIMS, excluding TVT-Secur, seem to have a similar cure rate and better post-operative outcomes vs SMUS at 12-24 mo FU

Recommendations for surgery for uncomplicated stress urinary incontinence in women	GR
Offer the mid-urethral sling to women with uncomplicated stress urinary incontinence as the preferred surgical intervention whenever available.	A
Warn women who are being offered a retropubic insertion of mid-urethral sling about the relatively higher risk of peri-operative complications compared to transobturator insertion.	A
Warn women who are being offered transobturator insertion of mid-urethral sling about the higher risk of pain and dyspareunia in the longer term.	A
Warn women who are being offered a single-incision sling that long-term efficacy remains uncertain.	A
Do a cystourethroscopy as part of the insertion of a mid-urethral sling.	C
Offer colposuspension (open or laparoscopic) or autologous fascial sling for women with stress urinary incontinence if mid-urethral sling cannot be considered.	A
Warn women undergoing autologous fascial sling that there is a high risk of voiding difficulty and the need to perform clean intermittent self-catheterisation; ensure they are willing and able to do so.	C
Inform older women with stress urinary incontinence about the increased risks associated with surgery, including the lower probability of success.	B
Inform women that any vaginal surgery may have an impact on sexual function.	B
Only offer new devices, for which there is no level 1 evidence base, as part of a structured research programme.	A*
Only offer adjustable mid-urethral sling as a primary surgical treatment for stress urinary incontinence as part of a structured research programme.	A*
Do not offer bulking agents to women who are seeking a permanent cure for stress urinary incontinence.	A*

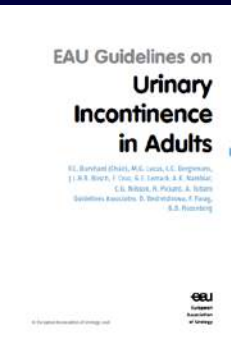
* *Recommendation based on expert opinion.*




bladder
bulking agent
endoscope with needle
urethral wall


10 o'clock
1.25 ml
2 o'clock
1.25 ml
6 o'clock
2.5 ml
Source: Urol Nurs © 2010 Society of Urologic Nurses and Associates

Summary of evidence	LE
Peri-urethral injection of bulking agent may provide short-term improvement in symptoms (3 months), but not cure, in women with SUI.	2a
Repeat injections to achieve therapeutic effect are often required.	2a
Bulking agents are less effective than colposuspension or autologous sling for cure of SUI.	2a
Adverse effect rates are lower compared to open surgery.	2a
There is no evidence that one type of bulking agent is better than another type.	1b
Transperineal route of injection may be associated with a higher risk of urinary retention compared to the transurethral route.	2b



Acceptability of Treatment

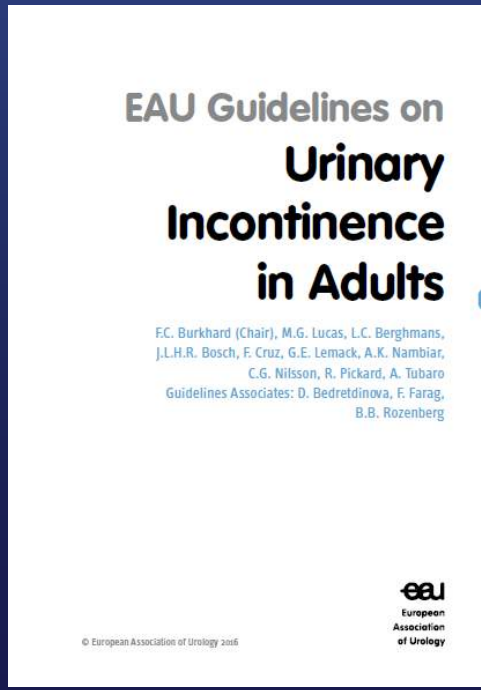
	Yes	No
Pelvic floor exercises for 6 months	60%	26%
Pelvic floor exercises for life	41%	44%
Regular drugs for life	14%	69%
Drugs to take as needed	51%	32%
Major operation (85% cure; 2% risk of catheterising)	23%	57%
Minor operation (85% cure; 2% risk of catheterising)	38%	43%
Clinic procedure (60% improvement; no long term risk)	57%	24%
Long term catheter	3%	79%
Learning to self catheterise	11%	73%

Robinson et al, 2003

WHAT CAN WE DO IN MEN?

Agenda

- Male urinary stress incontinence
  - Bulking agents
  - Fixed male slings
  - Adjustable male slings
  - Compression devices in males
    - Circunferential (AUS)
    - Non Circunferential (Adjust. Balloons)



Agenda

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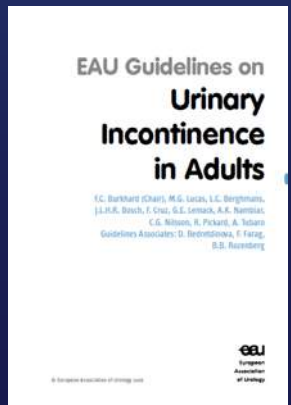
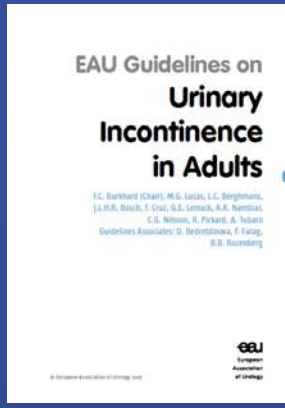


Bulking agents



- Few studies
- The only one included in a Cochrane Rev was on Macroplastique
  - Bulking agent vs. AUS:

    Continence rate 46% vs. 82%

Evidence summary	LE
There is no evidence that bulking agents cure post-prostatectomy incontinence.	2a
There is weak evidence that bulking agents can offer temporary, short-term, improvement in QoL in men with post-prostatectomy incontinence.	3
There is no evidence that one bulking agent is superior to another.	3

Agenda

- Male urinary stress incontinence
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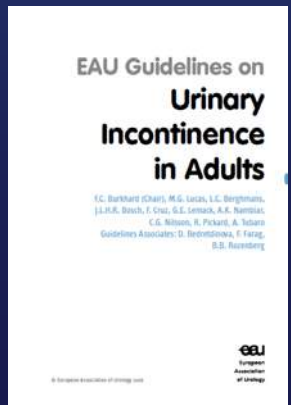
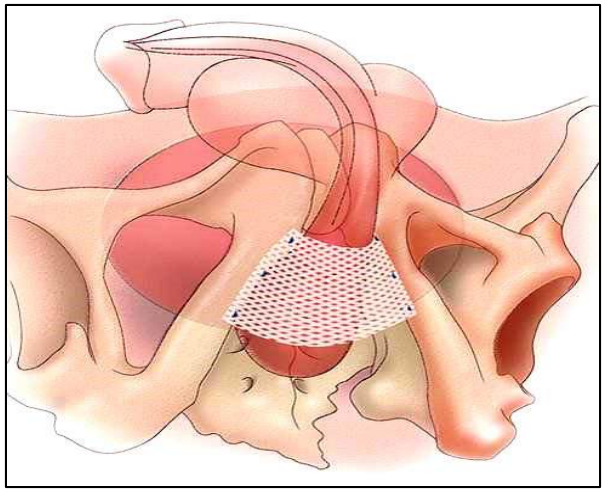
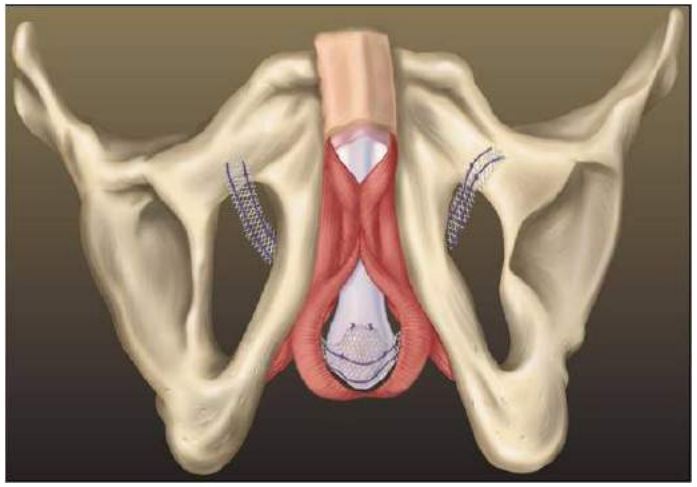


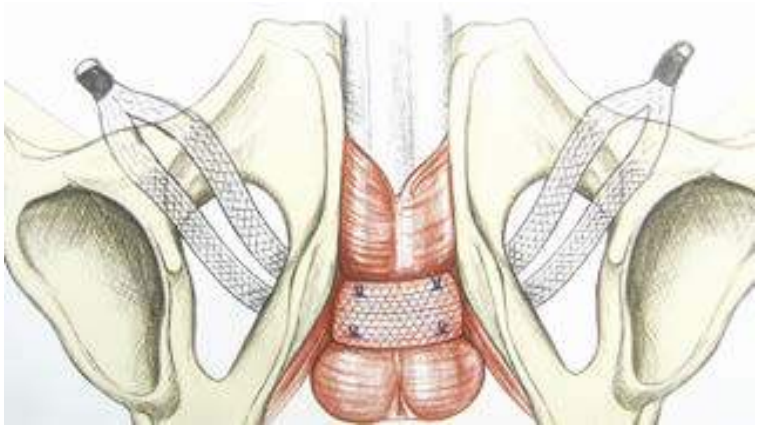
Non adjustable Slings



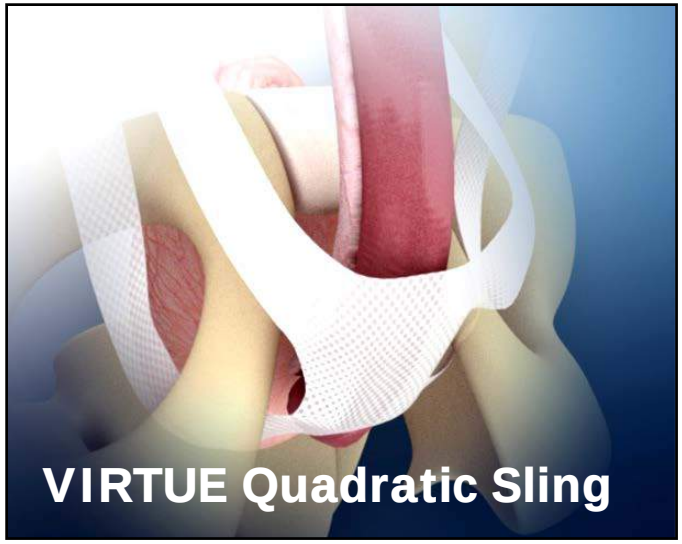
InVance Bone Anchor



AdVance Transobturator



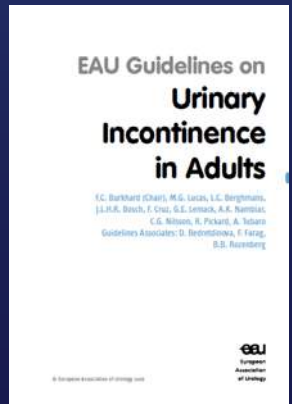
I-STOP TOMS



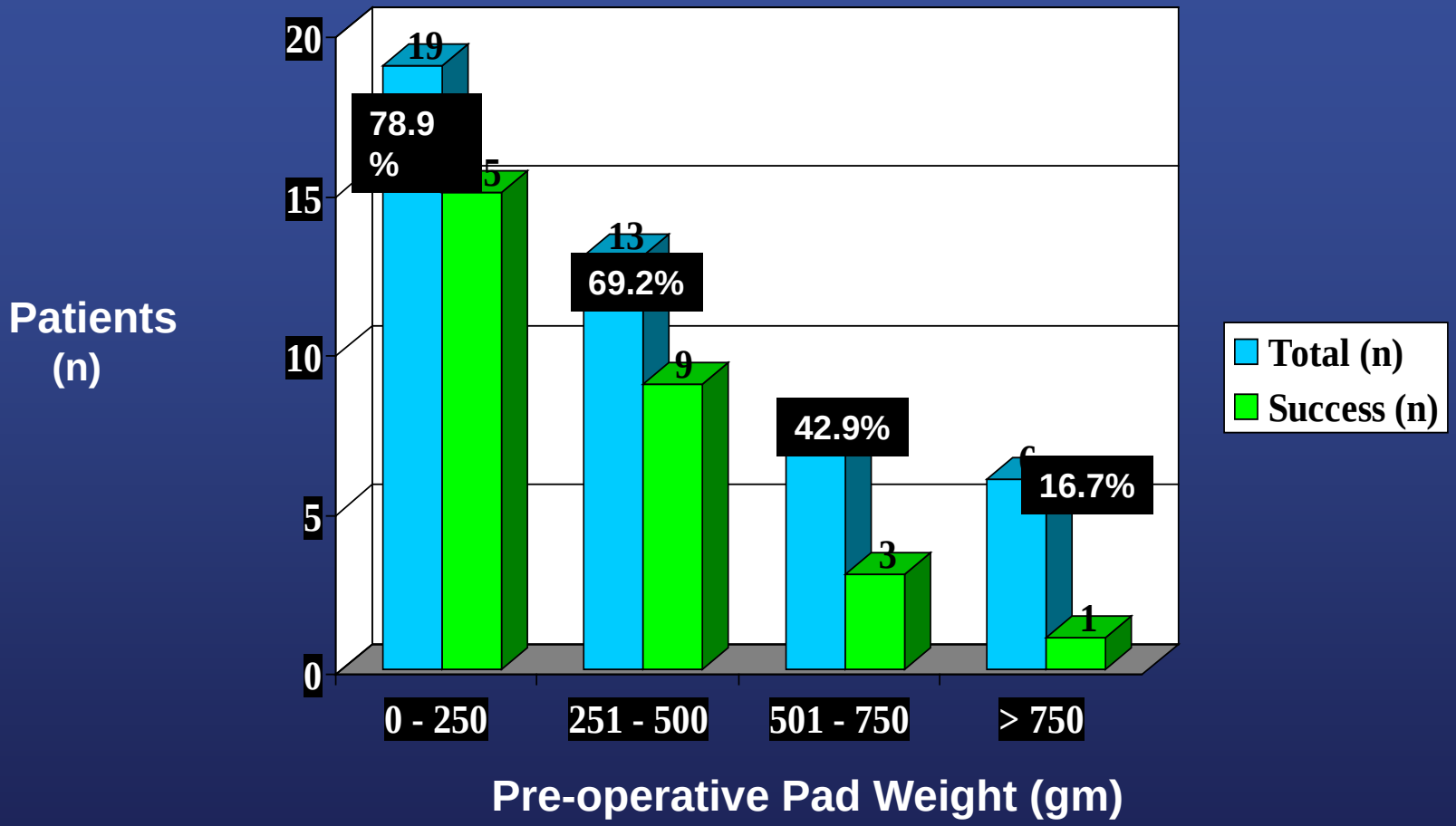
Fixed Male slings

Subjective cure rate: 50%; Improvement 30%; Falilure: 20%

Evidence summary	LE
There is limited short-term evidence that fixed male slings cure or improve post-prostatectomy incontinence in patients with mild-to-moderate incontinence.	3
Men with severe incontinence, previous radiotherapy or urethral stricture surgery may have less benefit from fixed male slings.	3
There is no evidence that one type of male sling is better than another.	3



Success by Pre-op Pad Weight



Success - 75.8% chance if preoperative *pad weight* < **496** gm
Odds of a successful surgery if pad wt < 496 gm are 7X greater than odds of successful surgery if pad wt > 496 gm

Agenda

- Male urinary stress incontinence
  - Bulking agents
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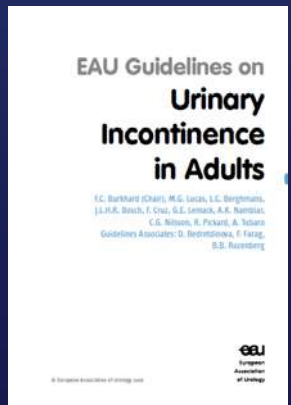
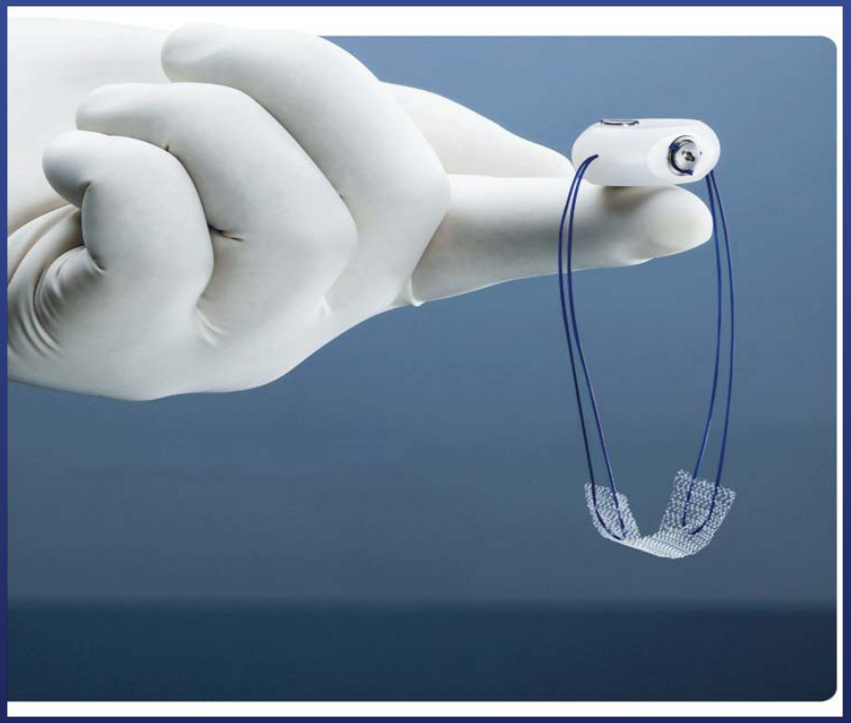
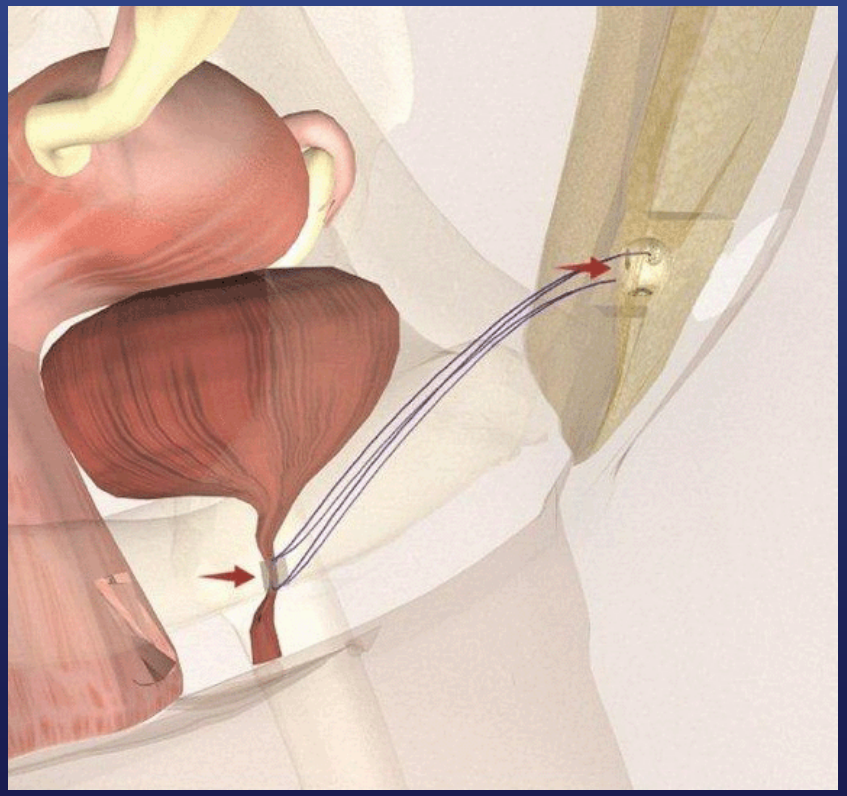


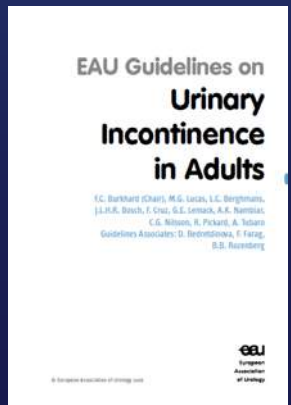
Adj. Male Slings
Remeex™ (Neomedic)





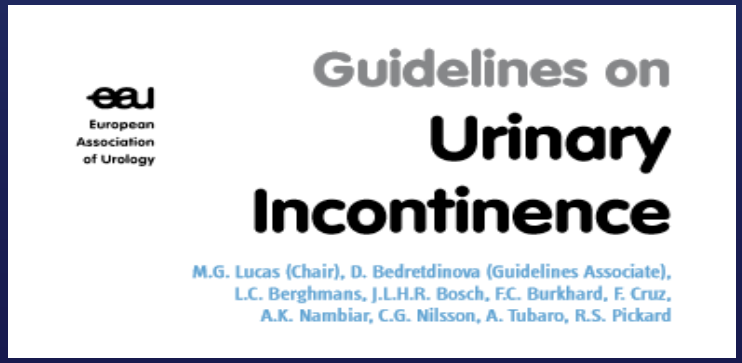
Adj. Male Slings

Evidence summary	LE
There is limited evidence that adjustable male slings can cure or improve SUI in men.	3
There is limited evidence that early explantation rates are high.	3
There is no evidence that adjustability of the male sling offers additional benefit over other types of sling.	3

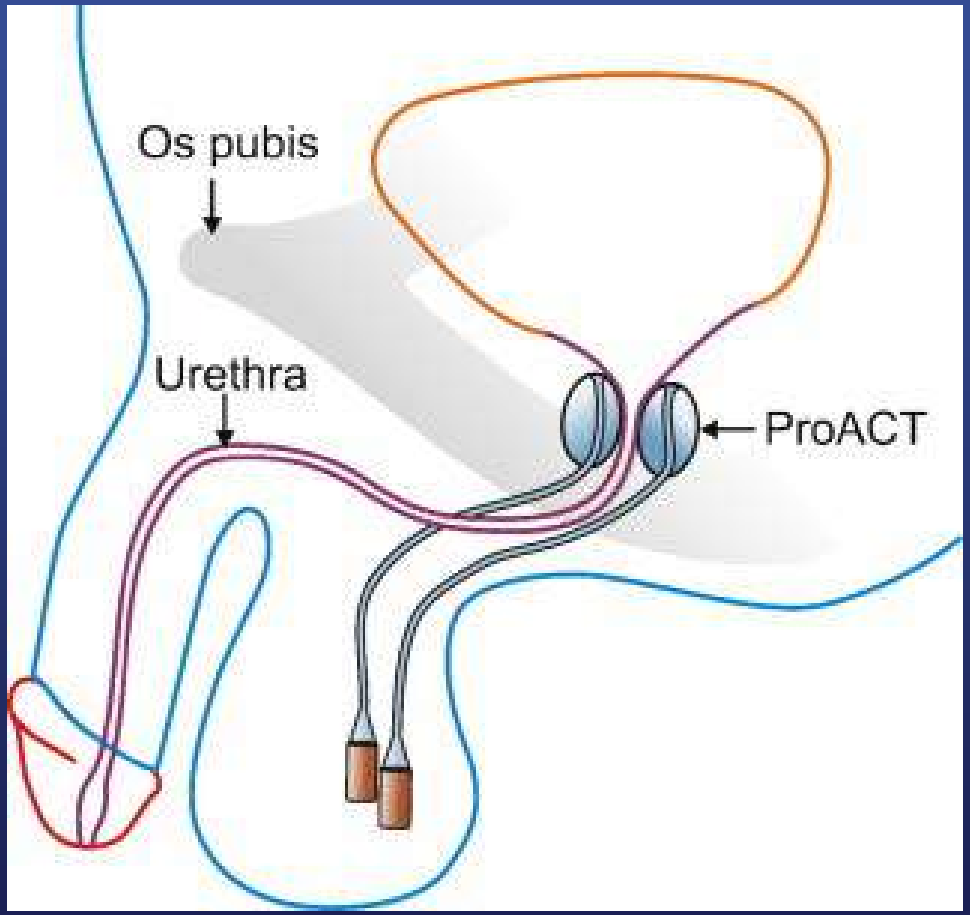


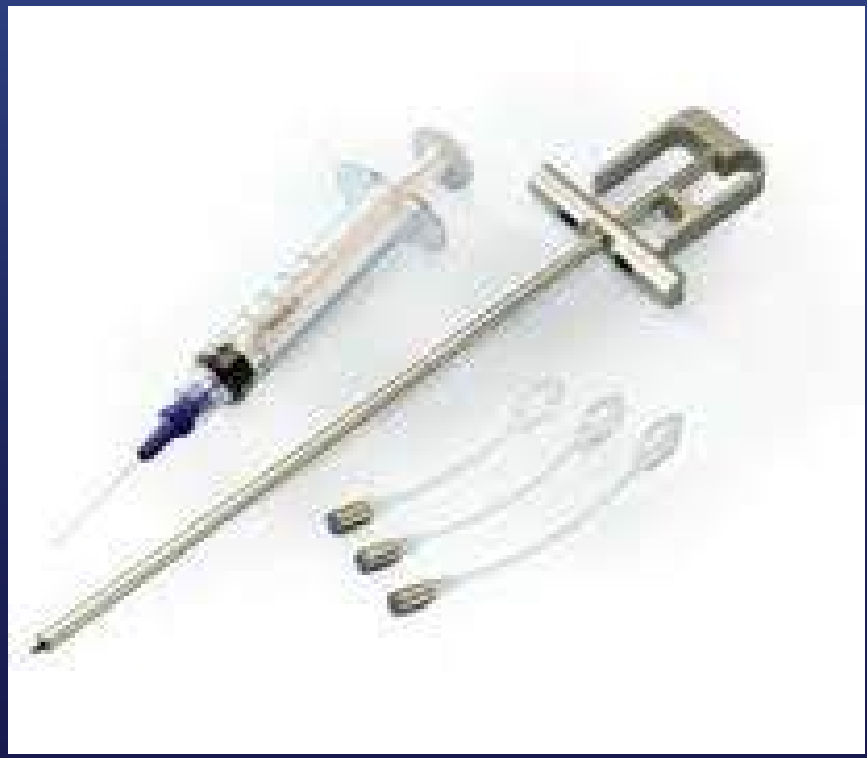
Agenda

- Male urinary stress incontinence
  - Bulking agents
  - Fixed male slings
  - Adjustable male slings
  - Compression devices in males
    - Circunferential (AUS)
    - Non Circunferential (Adjust. Balloons)



Adj. Ballons



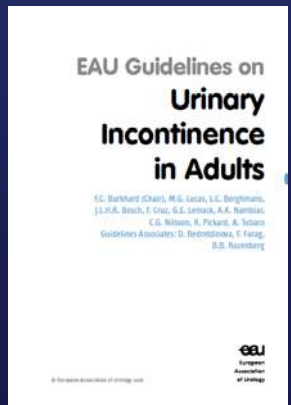


Inflating the ballons…

Adj. Ballons

Improved pts: 65%

Very limited short-term evidence suggests that the non-circumferential compression device (ProACT®) is effective for treatment of post-prostatectomy SUI.	3
The non-circumferential compression device (ProACT®) is associated with a high failure and complication rate leading to frequent explantation.	3



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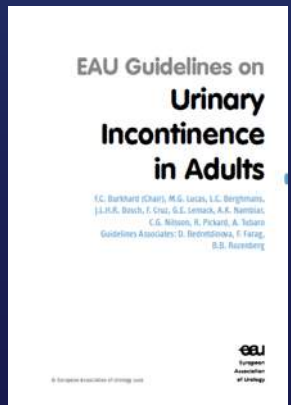
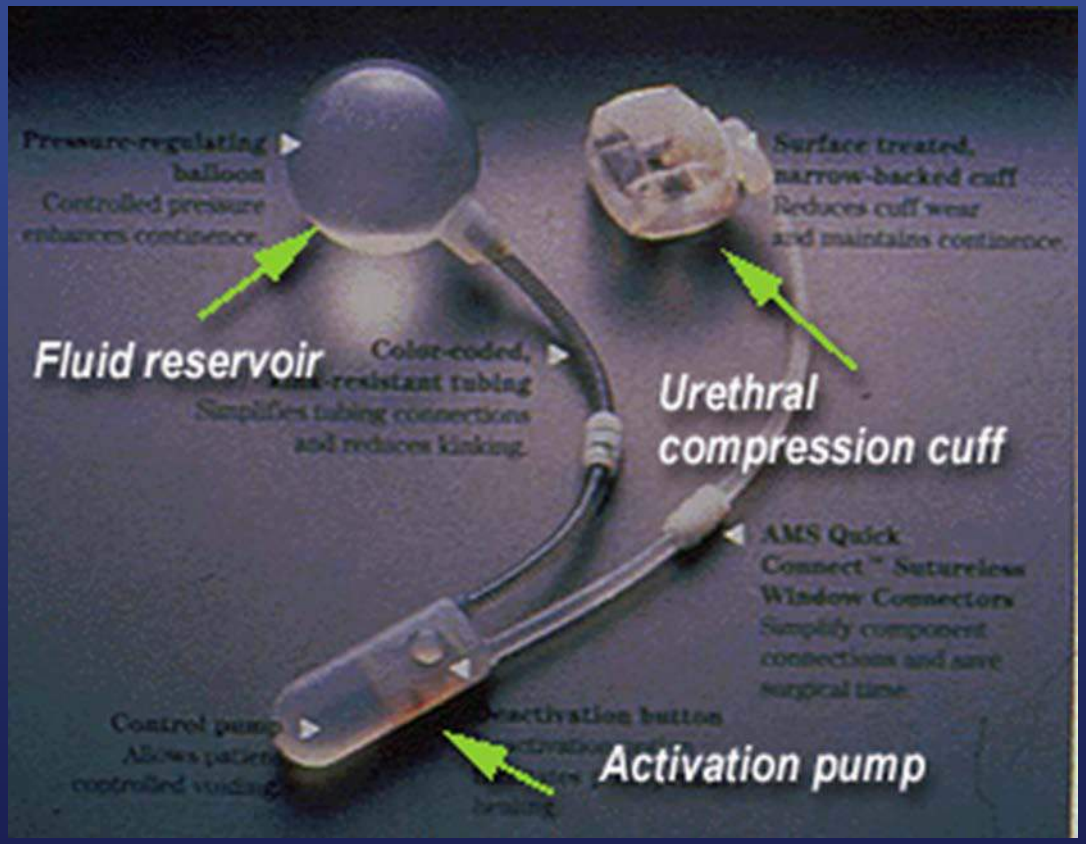
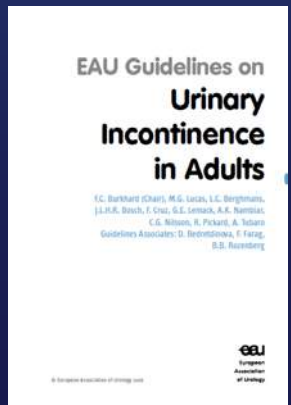


AMS 800 (AMS)


Fluid reservoir
Urethral compression cuff
Activation pump

AMS 800 (AMS)

- Two systematic reviews (poor quality studies)
- Continence rate: 80%
  - Lower in pts after RXT
  - More erosion if complete continence
- Effective as «salvage» treatment



41° CONGRESSO NAZIONALE SIUD

15° CONGRESSO SIUD

Fisioterapisti-Infermieri-Ostetriche

VARESE | 8-10 GIUGNO 2017

PRIMO ANNUNCIO

PRESIDENTI | ABSTRACT | INFO


ICS 2017
FLORENCE
12-15 September
Leading Continence
Research and Education
racts:
l 2017
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