

GUIDELINES ON URINARY INCONTINENCE

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This pocket version aims to synthesise the important clinical messages described in the full text and is presented as a series of 'evidence summaries' and graded 'action based recommendations', which follow the standard for levels of evidence used by the EAU (see Introduction chapter).

ASSESSMENT AND DIAGNOSIS

History and Physical Examination

Although there is no evidence to support this, there is absolute consensus of expert opinion that this is an essential step.

Recommendations 1	GR
Take a history to include the following; <ul style="list-style-type: none">• Type of incontinence (stress, urge or mixed)• Timing and severity• Any associated urinary symptoms• Obstetric and gynaecological history• Any comorbidities• Medication review	A*

<p>Do a physical examination to include:</p> <ul style="list-style-type: none"> • Abdominal exam to detect bladder enlargement or abdominal/pelvic mass • Perineal examination • Digital vaginal or rectal examination • Assess oestrogen status of woman • Assess voluntary pelvic floor contraction 	A*
<p>Consider early referral to specialist if:</p> <ul style="list-style-type: none"> • Urinary incontinence associated with pain • Haematuria • History of recurrent urinary tract infection • Previous pelvic surgery or radiotherapy • Constant leak suspicious of fistula • Any voiding difficulty • Suspicion of neurological disease 	A*

* Given Grade A because, despite an absence of evidence, expert opinion assigns absolute importance to these steps

Questionnaires

Recommendations 2	GR
Use a validated questionnaire when standardised assessment of severity and monitoring of effects of treatment is required, e.g. in trials or registries or for audit purposes.	C

Voiding diaries

Recommendations 3	GR
Use a frequency volume chart to evaluate co-existing storage and voiding dysfunction in patients with urinary incontinence.	A
Use a diary duration of between 3 and 7 days.	B

Urinalysis and UTI

Recommendations 4	GR
Do urinalysis as part of the initial assessment of a patient with urinary incontinence.	A
In a patient with urinary incontinence, treat a symptomatic urinary tract infection appropriately (see 'EAU Guidelines on Urological Infections').	A
Do not treat asymptomatic bacteriuria in elderly patients to improve urinary incontinence.	B

Post-voiding residual volume

Recommendations 5	GR
Use US to measure post-voiding residual.	A
Measure post-voiding residual in patients with urinary incontinence who have voiding dysfunction.	B
Measure post-voiding residual when assessing patients with complicated urinary incontinence.	C
Post-voiding residual should be monitored in patients receiving treatments that may cause or worsen voiding dysfunction.	B

Urodynamics

Recommendations 6 (NB: These refer only to neurologically intact adults with urinary incontinence)	GR
Clinicians carrying out urodynamics in patients with urinary incontinence should: <ul style="list-style-type: none">• Ensure that the test replicates the patient's symptoms• Interpret results in context of the clinical problem• Check recordings for quality control• Remember there may be physiological variability within the same individual.	C

Advise patients that the results of urodynamics may be useful in discussing treatment options, although there is limited evidence that performing urodynamics will alter the outcome of treatment for urinary incontinence.	C
Do not routinely carry out urodynamics when offering conservative treatment for urinary incontinence.	B
Perform urodynamics if the findings may change the choice of invasive treatment.	B
Do not routinely carry out urethral pressure profilometry.	C

Pad testing

A well-designed continence pad will contain any urine leaked within a period of time and this has therefore been used as a way of quantifying leakage. Although the International Continence Society has attempted to standardise pad testing, there remain differences in the way patients are instructed to undertake activity during the test.

Recommendations 7	GR
Use a pad test when quantification of urinary incontinence is required.	C
Use repeat pad test after treatment if an objective outcome measure is required.	C

Imaging

Recommendation 8	GR
Do not routinely carry out imaging of the upper or lower urinary tract as part of the assessment of uncomplicated stress urinary incontinence in women.	A

CONSERVATIVE TREATMENT

Conventional medical practice encourages the use of simple,

relatively harmless, interventions before resort to those associated with higher risks.

Simple Medical interventions

Correction of Underlying disease/cognitive impairment

Numerous conditions exacerbate UI or make it more likely to occur, whether or not they play any part in the pathophysiology of leakage. These conditions include:

- cardiac failure
- chronic renal failure
- diabetes
- chronic obstructive pulmonary disease
- neurological disorders
- stroke
- dementia
- multiple sclerosis
- general cognitive impairment
- sleep disturbances e.g. sleep apnoea.

Adjustment of medication

There is very little evidence of benefit from the adjustment of medication. There is also a theoretical risk, at least, that stopping or altering medication may bring with it more harm than good.

Recommendations 9	GR
Take a drug history from all patients with urinary incontinence.	A
Inform women with urinary incontinence that begins or worsens after starting systemic oestrogen replacement therapy that it may cause urinary incontinence.	A
Review any new medication associated with the development or worsening of urinary incontinence.	C

Constipation

Several studies have shown strong associations between constipation, urinary incontinence and overactive bladder. Constipation can be improved by behavioural and medical treatments.

Recommendations 10	GR
For adults with urinary incontinence, treat co-existing constipation.	C

Containment (pads etc)

Recommendations 11	GR
Offer pads when containment of urinary incontinence is needed.	B
Adapt the choice of pad to the type and severity of urinary incontinence and the patient's needs.	A
Offer catheterisation to manage urinary incontinence when no other treatments can be considered.	B
Offer condom catheters to men with urinary incontinence without significant residual urine.	A
Offer to teach intermittent catheterisation to manage urinary incontinence associated with retention of urine.	A
Do not routinely offer intravaginal devices as treatment for incontinence.	B
Do not use penile clamps for control of urinary incontinence in men.	A

Lifestyle Changes

Examples of lifestyle factors that may be associated with incontinence include obesity, smoking, level of physical activity and diet. It may therefore be possible to improve urinary

incontinence by beginning lifestyle interventions, such as weight loss, fluid restriction, reduction of caffeine or alcohol intake, limiting heavy activity and stopping smoking.

Recommendations 12	GR
Encourage obese women suffering from any urinary incontinence to lose weight (> 5%).	A
Advise adults with urinary incontinence that reducing caffeine intake may improve symptoms of urgency and frequency but not incontinence.	B
Patients with abnormally high or abnormally low fluid intake should be advised to modify their fluid intake appropriately.	C
Counsel female athletes experiencing urinary incontinence with intense physical activity that it will not predispose to urinary incontinence in later life.	C
Patients with urinary incontinence who smoke should be given smoking cessation advice in line with good medical practice although there is no definite effect on urinary incontinence.	A

Behavioural and physical therapies

Recommendations 13	GR
Offer supervised pelvic floor muscle training, lasting at least 3 months, as a first-line therapy to women with stress or mixed urinary incontinence.	A
Pelvic floor muscle training programmes should be as intensive as possible.	A
Offer pelvic floor muscle training to elderly women with urinary incontinence.	B
Consider using biofeedback as an adjunct in women with stress urinary incontinence.	A

Offer supervised pelvic floor muscle training to continent women in their first pregnancy to help prevent incontinence in the postnatal period.	A
Offer instruction on pelvic floor exercises to men undergoing radical prostatectomy to speed recovery of urinary incontinence.	B
Offer bladder training as a first-line therapy to adults with urge urinary incontinence or mixed urinary incontinence.	A
Offer timed voiding to adults with urinary incontinence, who are cognitively impaired.	A
Do not offer electrical stimulation with surface electrodes (skin, vaginal, anal) alone for the treatment of urinary incontinence.	A
Do not offer magnetic stimulation for the treatment of urinary incontinence or overactive bladder in adult women.	B
Do not offer posterior tibial nerve stimulation to women or men who are seeking a cure for urge urinary incontinence.	A
Offer, if available, posterior tibial nerve stimulation as an option for improvement of urge urinary incontinence in women, but not men, who have not benefited from antimuscarinic medication.	B
Support other healthcare professionals in use of rehabilitation programmes including prompted voiding for care of elderly care-dependent people with urinary incontinence.	A

DRUG TREATMENT OF URINARY INCONTINENCE

Antimuscarinics

Recommendations 14	GR
Offer immediate release or extended release formulations of antimuscarinic drugs as initial drug therapy for adults with urge urinary incontinence.	A
If immediate release formulations of antimuscarinic drugs are unsuccessful for adults with urge urinary incontinence, offer extended release formulations or longer-acting antimuscarinic agents.	A
Consider using transdermal oxybutynin if oral antimuscarinic agents cannot be tolerated due to dry mouth.	B
Offer and encourage early review (of efficacy and side effects) of patients on antimuscarinic medication for urge urinary incontinence (< 30 days).	A
When prescribing antimuscarinic drugs to elderly patients, be aware of the risk of cognitive side effects, especially in those receiving cholinesterase inhibitors.	C
Avoid using oxybutynin immediate release in patients who are at risk of cognitive dysfunction.	A
Consider use of trospium chloride in patients known to have cognitive dysfunction.	B
Use antimuscarinic drugs with caution in patients with cognitive dysfunction.	B
Do an objective assessment of mental function before treating patients whose cognitive function may be at risk.	C
Check mental function in patients on antimuscarinic medication if they are at risk of cognitive dysfunction.	C

Adrenergic drugs

Recommendations 15	GR
Offer mirabegron extended release to people with urge urinary incontinence depending on local licensing arrangements.	B

Duloxetine

Recommendations 16	GR
Duloxetine should not be offered to women or men who are seeking a cure for their urinary incontinence.	A
Duloxetine can be offered to women or men who are seeking temporary improvement in incontinence symptoms.	A
Duloxetine should be initiated using dose titration because of high adverse effect rates.	A

Intravaginal Oestrogen

Recommendations 17	GR
Offer post-menopausal women with urinary incontinence local oestrogen therapy, although the ideal duration of therapy and best delivery method are unknown.	A

Desmopressin

Recommendations 18	GR
Offer desmopressin to patients requiring occasional short-term relief from urinary incontinence and inform them that this drug is not licensed for this indication.	B
Do not use desmopressin for long-term control of urinary incontinence.	A

SURGICAL TREATMENT

Generic principles of surgery:

- Always discuss the purpose of surgery and the likely benefits and risks, with the patient and/or carers
- Explain alternative approaches even if they are not available locally
- Surgeons should be properly trained to do these procedures and perform adequate numbers to maintain expertise
- Surgeons should be able to report their own outcomes for any operation they offer and share this information with their patient

Recommendations 19 (Surgery for women with uncomplicated stress urinary incontinence)	GR
Offer the mid-urethral sling to women with uncomplicated stress urinary incontinence as the preferred surgical intervention whenever available.	A
Offer colposuspension (open or laparoscopic) or autologous fascial sling to women with stress urinary incontinence if mid-urethral sling cannot be considered.	A
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.	C
Warn women who are being offered a retropubic insertion synthetic 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 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.	A
Do a cystoscopy as part of retropubic insertion of a mid-urethral sling, or if difficulty is encountered during transobturator sling insertion, or if there is a significant cystocele.	C
Women being offered a single-incision sling device should be warned that long-term efficacy remains uncertain.	C
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.	C
Do not offer bulking agents to women who are seeking a permanent cure for stress urinary incontinence.	A

Complicated Stress Urinary Incontinence in women

Recommendations 20 <i>(Surgery for complicated stress urinary incontinence in women)</i>	GR
The choice of surgery for recurrent stress urinary incontinence should be based on careful evaluation of the individual patient including video-urodynamics.	C
Warn women with recurrent stress urinary incontinence, that the outcome of a surgical procedure, when used as a second-line treatment, is generally inferior to its use as a first-line treatment, both in terms of reduced efficacy and increased risk of complications.	C

Consider secondary synthetic sling, colposuspension or autologous sling as first options for women with complicated stress urinary incontinence.	C
Do not undertake open colposuspension in women who have had more than two previous operations for urinary incontinence.	C
Implantation of AUS or ACT for women with complicated stress urinary incontinence should only be offered in high-volume centres.	C
Warn women receiving AUS or ACT that, even in high-volume centres, there is a high risk of complications, mechanical failure or a need for explantation.	C

AUS = artificial urinary sphincter; ACT = adjustable compression therapy.

Women with both Stress Urinary Incontinence and Pelvic Organ Prolapse

Recommendations 21 (Women requiring surgery for bothersome POP who have symptomatic or unmasked SUI)	GR
Offer simultaneous surgery for pelvic organ prolapse and stress urinary incontinence.	A
Warn women of the increased risk of adverse events with combined surgery compared to prolapse surgery alone.	A

POP = pelvic organ prolapse; SUI = stress urinary incontinence.

Recommendations 22 (Women requiring surgery for bothersome POP without symptomatic or unmasked SUI)	GR
Warn women that there is a risk of developing de novo stress urinary incontinence after prolapse surgery.	A

Inform women that the benefit of prophylactic stress urinary incontinence surgery is uncertain.	C
Warn women that the benefit of surgery for stress may be outweighed by the increased risk of adverse events with combined surgery compared to prolapse surgery alone.	A

POP = pelvic organ prolapse; SUI = stress urinary incontinence.

Men with Stress Urinary Incontinence

Recommendations 23 (Surgical treatment of men with stress urinary incontinence)	GR
Only offer bulking agents to men with mild post-prostatectomy incontinence who desire temporary relief of urinary incontinence symptoms.	C
Do not offer bulking agents to men with severe post-prostatectomy incontinence.	C
Offer fixed slings to men with mild-to-moderate post-prostatectomy incontinence.	B
Warn men that severe incontinence, prior pelvic radiotherapy or urethral stricture surgery, may worsen the outcome of fixed male sling surgery.	C
Offer AUS to men with moderate-to-severe post-prostatectomy incontinence.	B
Implantation of AUS or ACT for men should only be offered in high volume centres.	C
Warn men receiving AUS or ACT that, even in high volume centres, there is a high risk of complications, mechanical failure or a need for explantation.	C
Do not offer non-circumferential compression device (ProACT®) to men who have had pelvic radiotherapy.	C

AUS = artificial urinary sphincter; ACT = artificial compression device.

Surgical interventions for Refractory Detrusor Overactivity

Intravesical Botulinum Toxin injection

Recommendations 24	GR
Offer botulinum toxin A intravesical injections to patients with urge urinary incontinence refractory to antimuscarinic therapy.	A
Always check the botulinum toxin brand before injection, as units among the available brands are not interchangeable.	A
Offer onabotulinum toxin A 100 U as initial dose to minimise the risk of urinary retention and urinary tract infection.	A
Warn patients of the limited duration of response, the possible prolonged need to self-catheterise (ensure that they are willing and able to do so) and the associated risk of urinary tract infection.	A
Patients should also be informed of the licensing status of botulinum toxin A, and that long-term adverse effects, although improbable, remain uncertain.	A

Sacral Nerve Stimulation (neuromodulation)

Recommendation 25	GR
If available, offer to patients, who have urge urinary incontinence refractory to conservative therapy, the opportunity to be treated with sacral nerve neuromodulation before bladder augmentation or urinary diversion is considered.	A

Augmentation Cystoplasty / Urinary Diversion

Recommendations 26	GR
Only offer augmentation cystoplasty to patients with detrusor overactivity incontinence who have failed conservative therapy, in whom the possibility of botulinum toxin and sacral nerve stimulation has been discussed.	C
Warn patients undergoing augmentation cystoplasty of the high risk of having to perform clean intermittent self-catheterisation; ensure they are willing and able to do so.	C
Do not offer detrusor myectomy as a treatment for urinary incontinence.	C
Only offer urinary diversion to patients who have failed less invasive therapies for the treatment of urinary incontinence and who will accept a stoma.	C
Warn patients undergoing augmentation cystoplasty or urinary diversion of the high risk of short-term and long-term complications, and the possible small risk of malignancy.	C
Life-long follow-up is recommended for patients who have undergone augmentation cystoplasty or urinary diversion.	C

Treatment of Mixed Urinary Incontinence

Recommendations 27	GR
Treat the most bothersome symptom first in patients with mixed urinary incontinence.	C
Warn patients with mixed urinary incontinence that the chance of success of pelvic floor muscle training is less satisfactory than for stress urinary incontinence alone.	B

Offer antimuscarinic drugs to patients with urgency-predominant mixed urinary incontinence.	A
Warn patients with mixed urinary incontinence that surgery is less likely to be successful than surgery in patients with stress urinary incontinence alone.	A

Older People with Urinary Incontinence

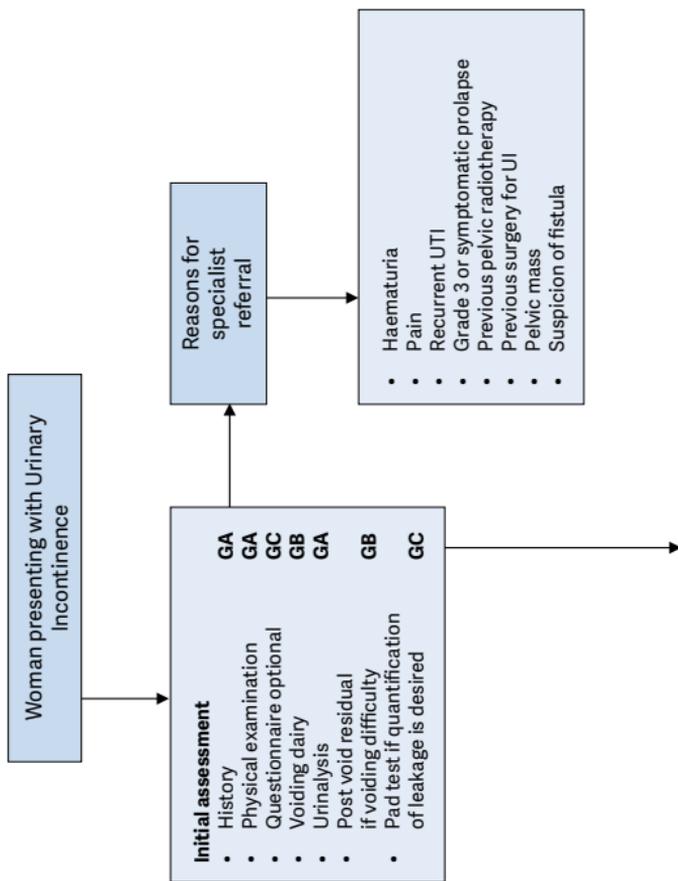
Recommendations 28 <i>(Conservative treatment of elderly people with urinary incontinence)</i>	GR
Do not treat asymptomatic bacteriuria in elderly patients to improve urinary incontinence.	B
Support other healthcare professionals in use of rehabilitation programmes, including prompted voiding for the care of elderly care-dependent people with urinary incontinence.	A
For adults with urinary incontinence, treat co-existing constipation.	C
Offer pelvic floor muscle training to elderly women with urinary incontinence.	B

Recommendations 29 <i>(Antimuscarinic drugs)</i>	GR
Offer immediate release or extended release formulations of antimuscarinic drugs as initial drug therapy for adults with urge urinary incontinence.	A
If immediate release formulations of antimuscarinic drugs are unsuccessful for adults with urge urinary incontinence, offer extended release formulations or longer-acting antimuscarinic agents.	A
Consider using transdermal oxybutynin if oral antimuscarinic agents cannot be tolerated due to dry mouth.	B

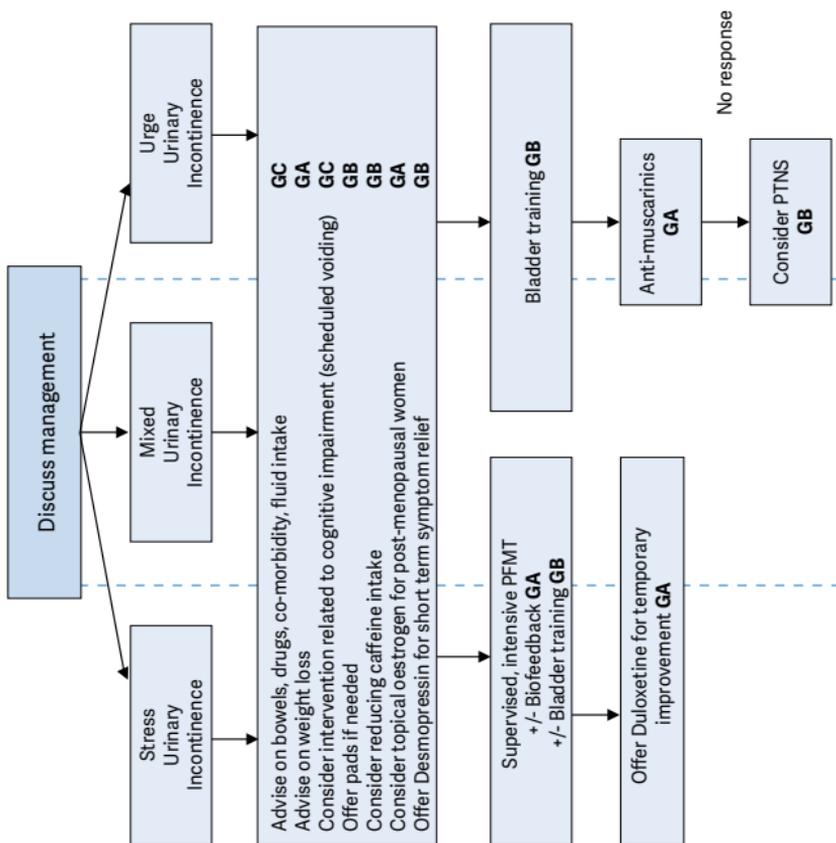
Offer and encourage early review (of efficacy and side effects) of patients on antimuscarinic medication for urge urinary incontinence (< 30 days).	A
When prescribing antimuscarinic drugs to elderly patients, be aware of the risk of cognitive side effects, especially in those receiving cholinesterase inhibitors.	C
Avoid using oxybutynin immediate release in patients who are at risk of cognitive dysfunction.	A
Consider use of trospium chloride in patients known to have cognitive dysfunction.	B
Use solifenacin, tolterodine and darifenacin with caution in patients with cognitive dysfunction.	B
Do an objective assessment of mental function before treating patients whose cognitive function may be at risk.	C
Check mental function in patients on antimuscarinic medication if they are at risk of cognitive dysfunction.	C

Recommendation 30 <i>(Surgery for urinary incontinence in the elderly)</i>	GR
Inform older women with stress urinary incontinence about the increased risks associated with surgery, including the lower probability of success.	B

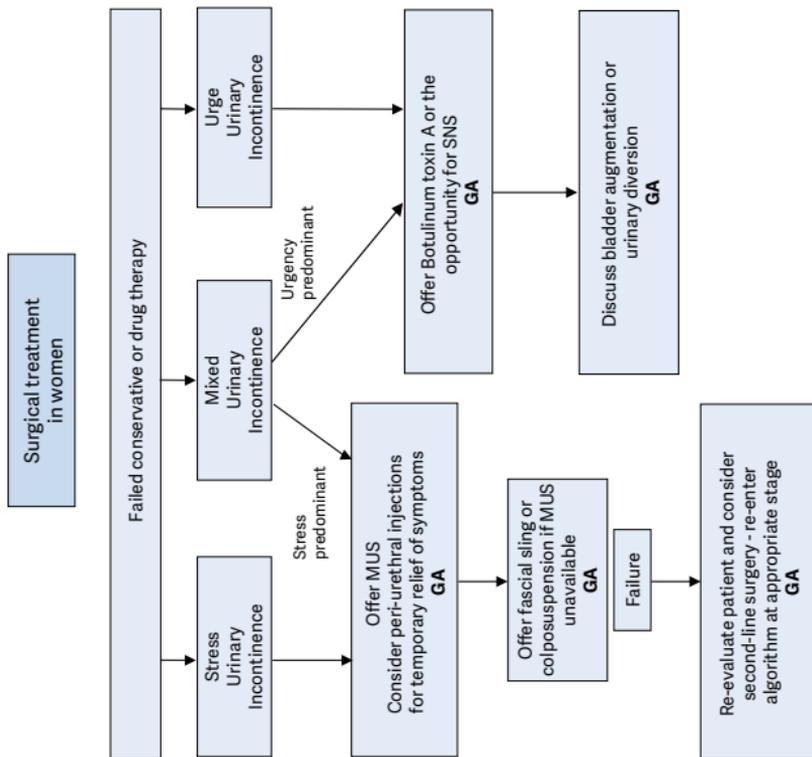
This short text is based on the more comprehensive EAU guidelines (ISBN 978-90-79754-71-7), available to all members of the European Association of Urology at their website, <http://www.uroweb.org>.

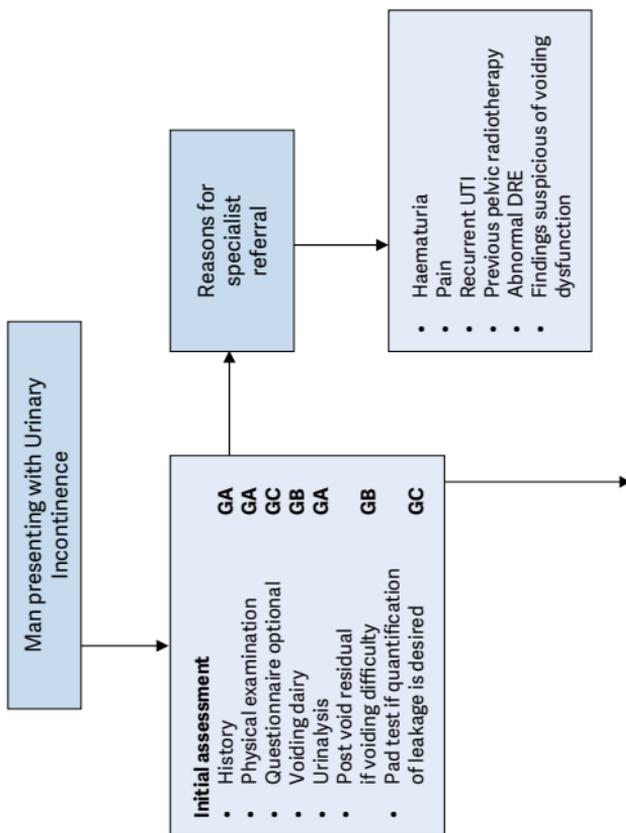


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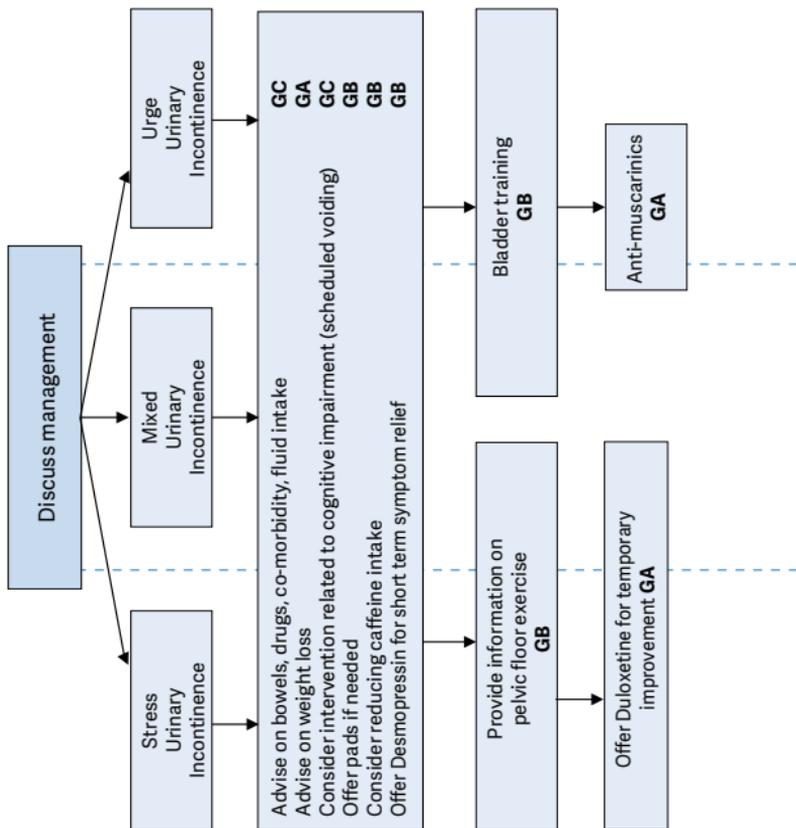


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Surgical treatment in men

