Additional file 1: Systematic reviews and meta-analyses on benign prostatic hyperplasia

Reference	Question	Searching	Included papers	Quality/ sensitivity	Inclusion criteria	Treatment	Duration	Outcomes
Eri & Tveter: Alpha-blockage in the treatment of symptomatic BPH. J Urol 1995 154: 923-934	Efficacy and harm associated with alpha-blockers in BPH	MEDLINE to Jan 95, plus reference lists and personal files	29 randomised placebo-controlled trials with 3,464 men. Only three appeared to be double blind	No quality analysis No sensitivity analysis	Maximum flow rate of <15 mL/second in 15 studies, less than 20 in one and not reported in 13	Seven different alpha blockers	24 weeks or longer in five studies	Change in maximum flow rate % change in residual volume % change in symptoms Dropout rate Adverse effects mentioned
Boyle et al. Prostate volume predicts outcome of treatment of BPH with finasteride. Urology 1996 48: 398-405. (Bandolier 46)	Effect of finasteride on symptoms and examine predictors of outcomes	All randomised trials comparing finasteride 5 mg with placebo at one year	Six trials with 2601 men. No information about methodological quality, though unlikely to be a problem	No quality analysis No sensitivity analysis	Maximum flow rate of 15 or less in five studies, 12-20 in sixth. Moderate symptoms entry criterion of all	Finasteride 5 mg	52 weeks	Change in maximum flow rate % change in symptoms Analysis by prostate volume
Chapple et al. Tamsulosin, the first prostate-selective alpha-1A -Adrenoceptor antagonist. A meta-analysis of two randomized, placebo-controlled, multicentre studies in patients with benign prostatic hyperlasia. Eur Urol 1996; 29: 155-167	Efficacy and harm associated with tamsulosin in BPH	No searching	Two randomised placebo controlled trials with 575 men	No quality analysis No sensitivity analysis	BPH with maximum flow rate of betwewn 4-12 mL/s, voided volume greater than 120 ml and Boyarsky total symptom score more than 6	Tamsulosin 0.4 mg (modified release capsule)	12 weeks	Maximum flow rate, voided volume, residiual urine, symptom score at baseline, end and change. % change in maximum flow rate and symptoms Adverse events
Byrnes et al. Combined analysis of two multicentre studies of finasteride 5 mg in treatment of symptomatic BPH. Prostate Cancer and Prostatic Disease 1997 1: 26-31.	Analysis by age older and younger than 65 years	No searching	Two randomised placebo controlled trials with 4,732 men	No quality analysis No sensitivity analysis	BPH with moderate to severe symptoms (AUA scores 8 or more)	Finasteride 5 mg	52 weeks	Change in symptom score Adverse events PSA DHT

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Roehrborn. Meta-analysis of randomised clinical trials of finasteride. Urology 1998 51 Suppl 4A: 46-49.	Duplicate of Boyle et al		Includes analysis of prostate size distribution					
Wilt et al. Saw palmetto extracts for treatment of benign prostatic hyperplasia. JAMA 1998 280: 1604-1609 (Bandolier 73)	Efficacy and harm associated with Saw palmetto (serenoa repens) in BPH	MEDLINE, EMBASE, Cochrane Library and fields registers, plus reference lists, reviews and trialists. To mid 1997	18 randomised comparisons with placebo with 2,939 men lasting at least 30 days. Mean age 65 years. 16 studies were double blind.	Quality analysis (Schulz) No sensitivity analysis	Initial symptoms consistent with moderate BPH. Baseline mean urinary flow was 5.7 mL/sec and prostate volume was 44 mL.	No information	Mean duration was 9 weeks	Peak urinary flow rate vs placebo (8 trials, 642 men) Nocturia vs placebo (10 trials, 634 men) IPSS vs placebo (2 trials, 1440 men)
Wilt et al. Beta-sitosterol for the treatment of benign prostatic hyperplasia: a systematic review. BJU International 1999 83: 976-983. (Bandolier 92)	Efficacy with beta-sitosterol in BPH	MEDLINE, EMBASE, Cochrane Library and fields registers, plus reference lists, reviews and trialists. To mid 1998	4 randomised comparisons with placebo in 519 men. Mean age about 65 years. All studies double-blind	Quality analysis (Schulz) No sensitivity analysis	Initial symptoms consistent with moderate BPH. Maximum flow rate under 15 ml/sec in two, under 20 mL/sec on one	No information	Three studies lasted 24-26 weeks, one of 4 weeks.	Peak urinary flow rate vs placebo Symptom score vs placebo Residual volume vs placebo Mean change in above
Macdonald et al. A systematic review of cernilton for the treatment of BPH. BJU International 1999 85: 836-841.	Efficacy and safety of rye grass pollen extract (cernilton) for BPH	MEDLINE, EMBASE, Cochrane Library and fields registers, plus reference lists, reviews and trialists. To mid 1997	4 randomised comparisons (2 with placebo, 2 with other complementary therapies) in 444 men. Mean age about 65 years. Three studies double-blind	Quality analysis (Schulz) No sensitivity analysis	Men with BPH	No information	One study lasted 24 weeks, the others being 12-16 weeks	Peak urinary flow rate Symptom score Residual volume Nocturia

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Djavan & Marberger. A meta-analysis of the efficacy and tolerability of alpha1-adrenoreceptor antagonists in patients with lower urinary tract symptoms suggestive of BPH. European Urology 1999 36: 1-13.	Distinguishing between members of drug class for efficacy and harm	MEDLINE, for English language papers to mid 98	21 studies, "most" of which were randomised and double-blind", 6,333 men in placeb0-controlled studies.	No quality analysis No sensitivity analysis	No information	Any dose	1 month to 1 year	Percentage improvement in symptom score (end vs baseline) Percentage improvement in maximum flow rate Percentage with bothersome adverse effects Percentage with adverse effects related to vasodilator properties
Ishani et al. Pygeum africanum for treatment of patients with BPH: a systematic review and quantitative meta-analysis. American Journal of Medicine 2000 109: 654-664.	Efficacy and safety of Pygeum africanum for BPH	MEDLINE, EMBASE, Cochrane Library and fields registers, plus reference lists, reviews and trialists. To mid 2000	18 randomised trials with 1,562 men lasting at least 30 days. Mean age 66 years. 17 studies were double blind.	Quality analysis (including Schulz) No sensitivity analysis	Men with BPH	14 studies used a standardise extract	Mean duration was 9 weeks	Peak urinary flow rate Symptom score Residual volume Nocturia
Boyle et al. Meta-analysis of clinical trials of permixon in the treatment of symptomatic BPH. Urology 2000 55: 533-539.	Clinical efficacy of permixon (an extract of serenoa repens) versus placebo	No formal search strategy	13 trials (11 randomised) with 2,859 men	No quality analysis Sensitivity analysis of all versus randomised studies	Men with BPH	320 mg a day	Duration 3 to 26 weeks	Peak urinary flow rate Nocturia Baseline, end, and change
McNeill et al. Postvoid residual urine in patients with lower urinary tract symptoms suggestive of BPH: pooled analysis of eleven controlled studies with alfuzosin. Urology 2001 57: 459-465.	Effect of alpha-blocker on residual volume and other outcomes.	No formal search strategy, but data from clinical trials	11double blind randomised trials comparing alfuzosin with placebo. 953 men aged 42-89 years (mean 65 years).	No quality analysis No sensitivity analysis	Men with BPH and residual volume 50-350 mL. Peak flow rate less than 15 mL/sec	7.5 mg (immediate release) or 10 mg (sustained release)	4-24 weeks	Change in residual volume

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Yang et al. Transurethral incision compared with transurethral resection of the prostate for bladder outlet obstruction: a systematic review and meta-analysis of randomized controlled trials. Journal of Urology 2001 165: 1526-1532.	Efficacy of incision compared with resection	MEDLINE, EMBASE, ISA, Cochrane Library, plus Cochrane Review Group databases, to 1999	9 randomised trials with 691 men. Mean ages 60s to early 70s	Two quality scores	Lower urinary tract symptoms suggestive of bladder outlet obstruction	Not applicable	Follow up at various times from 3-60 months. 12 month data analysed	Maximum flow rate (4 trials, 226 men) Symptom score (4 trials, 243 men) Actual baseline and 3/12 month scores and flow rates where available
Roehrborn et al. Clinical predictors of spontaneous acute urinary retention in men with LUTS and clinical BPH: a comprehensive analysis of the pooled placebo groups of several large clinical trials. Urology 2001 58: 210-216.	Clinical predictors of acute retention	No formal search strategy, but data from clinical trials	3,780 men, mean age 64 years, peak flow 11 mL/sec, IPSS 15	Not applicable - all four studies randomised and double-blind.	Men with BPH. Baseline mean data given	Placebo	2-4 years	Predictive factors for acute urinary retention.