

Chronic pelvic pain



Khalid Khan

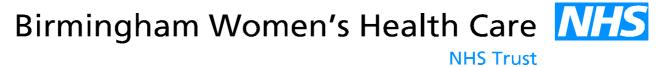
Professor of Obstetrics-Gynaecology and Clinical Epidemiology

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Richard Gray

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Chronic Pelvic Pain

- Background
- Prevalence
- Aetiology
- Surgical treatment

Chronic pelvic pain

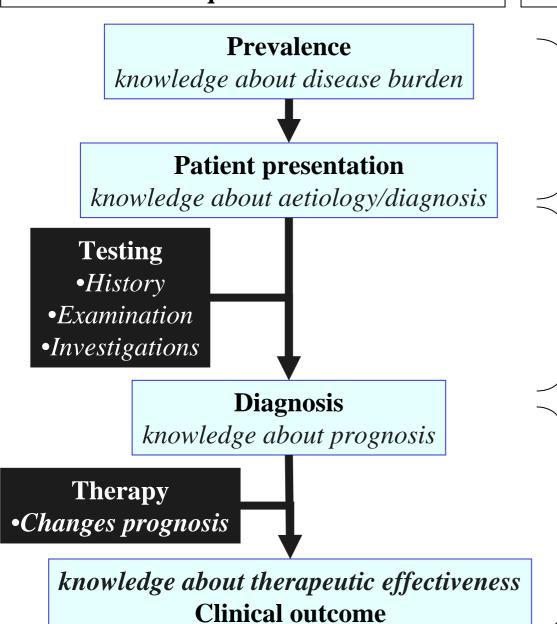
- Annual prevalence of 38/1000
- Major impact on health-related quality of life, work productivity and health care utilisation.
- Constant or intermittent, cyclic or acyclic pain, that persists for 6 months or more and includes dysmenorrhoea, deep dyspareunia and intermenstrual pain (Vercellini et al 1989).

Background

- Laparoscopy commoner than detailed history taking in the UK
- Pain is complex phenomenon affected by several factors
- Knowledge might be helpful in clinical evaluation and management

Clinical Process and knowledge requirements

Research evidence sought from literature searches

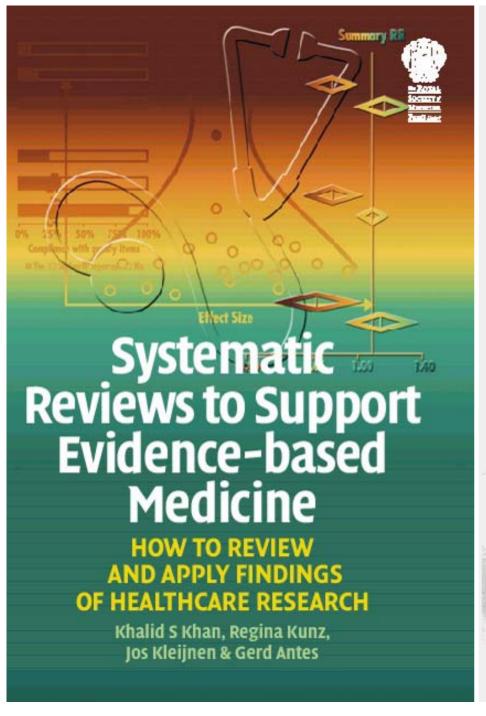


Prevalence Research

Aetiologic and Diagnostic Research

Prognostic Research

Therapy Research



2003 BMA Medical Book Competition

Commended

Basis of medicine

Presented to Khalid S Khan, Regina Kunz, Jos Kleijnen, Gerd Antes and RSM Press

For

Systematic Reviews to Support Evidence-based Medicine: how to review and apply findings of healthcare research











Five steps to conducting a systematic review

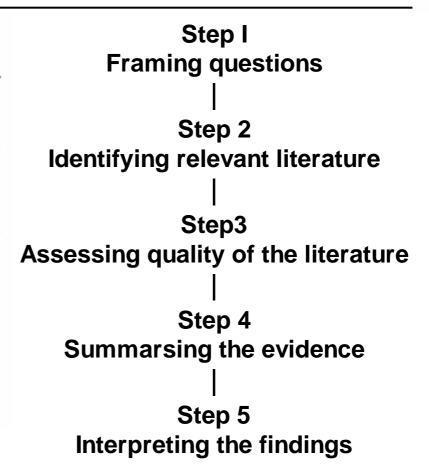
Khalid S Khan MB MSc Regina Kunz MD MSc1 Jos Kleijnen MD PhD2 Gerd Antes PhD3

J R Soc Med 2003;96:118-121

Systematic reviews and meta-analyses are a key element of evidence-based healthcare, yet they remain in some ways mysterious. Why did the authors select certain studies and reject others? What did they do to pool results? How did a bunch of insignificant findings suddenly become significant? This paper, along with a book¹ that goes into more detail, demystifies these and other related intrigues.

A review earns the adjective systematic if it is based on a clearly formulated question, identifies relevant studies, appraises their quality and summarizes the evidence by use of explicit methodology. It is the explicit and systematic approach that distinguishes systematic reviews from traditional reviews and commentaries. Whenever we use the term review in this paper it will mean a systematic review. Reviews should never be done in any other way.

In this paper we provide a step-by-step explanation there are just five steps—of the methods behind reviewing,



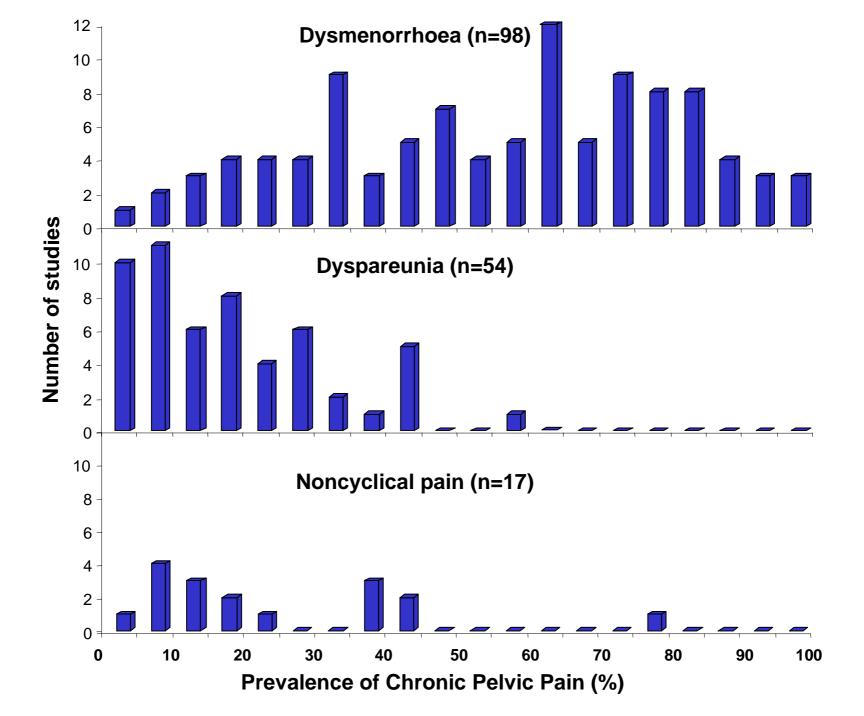
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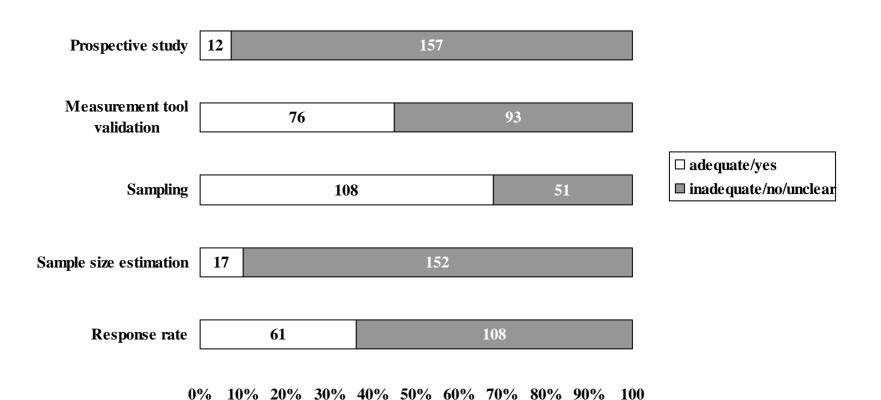
Review Question - prevalence

- Population: women at risk
- Outcomes: Noncyclical CPP, dysmenorrhoea and dyspareunia

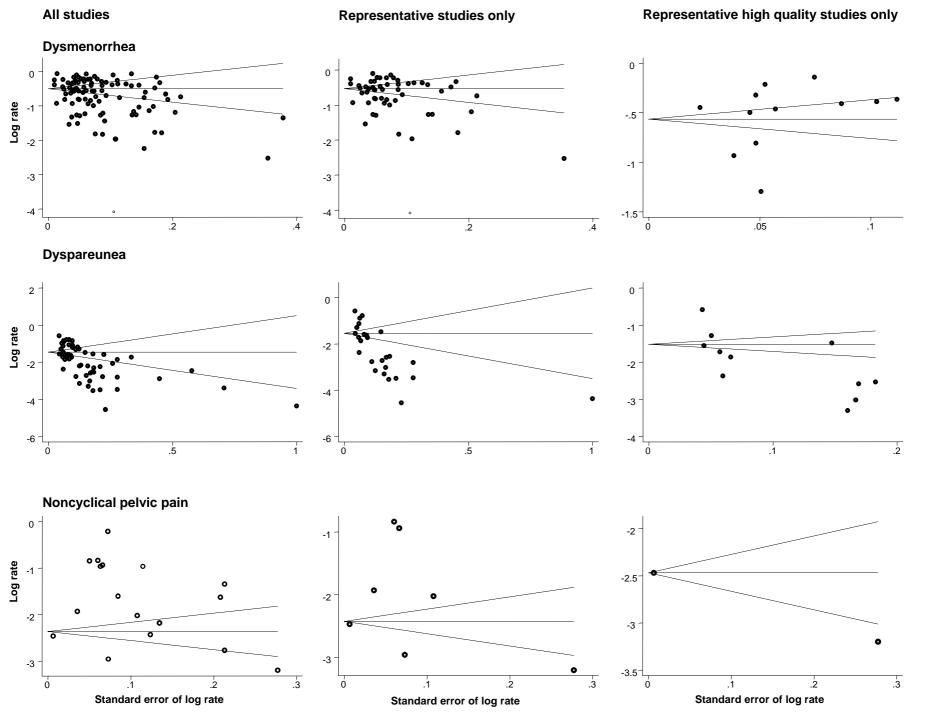
Total citations identified from electronic searches 1226 1001 Citations excluded after screening abstract Papers retrieved for detailed evaluation: 225 Searching of reference lists: 27 Papers excluded: 109 No/ Insufficient /unclear data 5 Not a primary data source 19 Not on prevalence of pelvic pain 50 Duplicate data 9 Study performed in: pregnant/postnatal women 8 : other disorders 4 : cancer 4 : unrepresentative population 3 Comment/letter/discussion/ case-control study/case report 4 Not on file/unobtainable 3 Primary papers included in systematic review: 143 169 studies: 17 -noncyclical CPP 54 - dyspareunia 98 - dysmenorrhoea

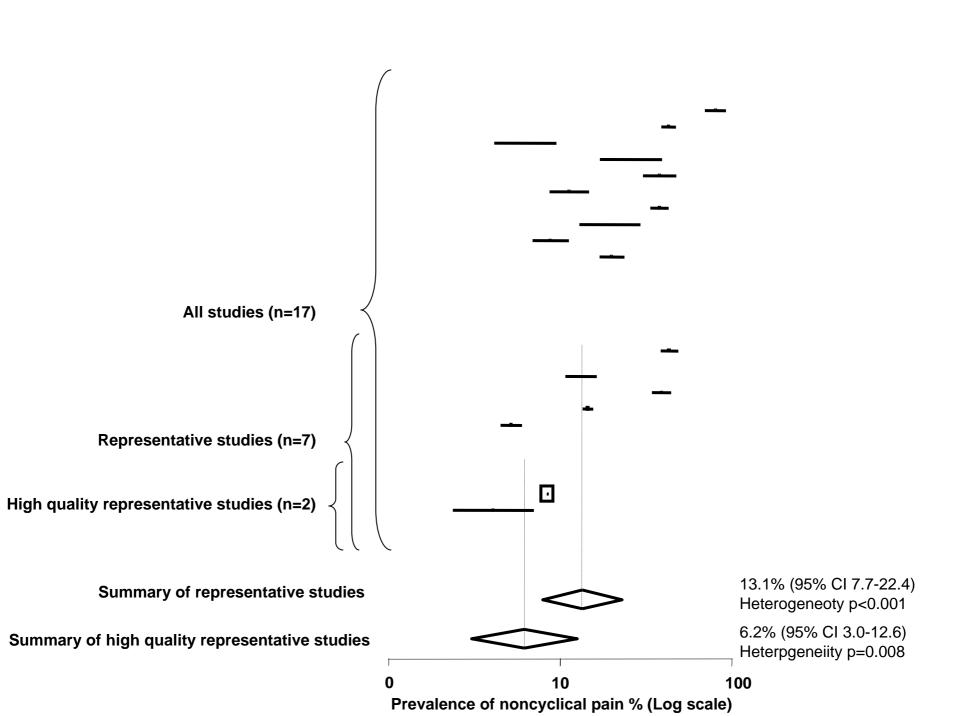


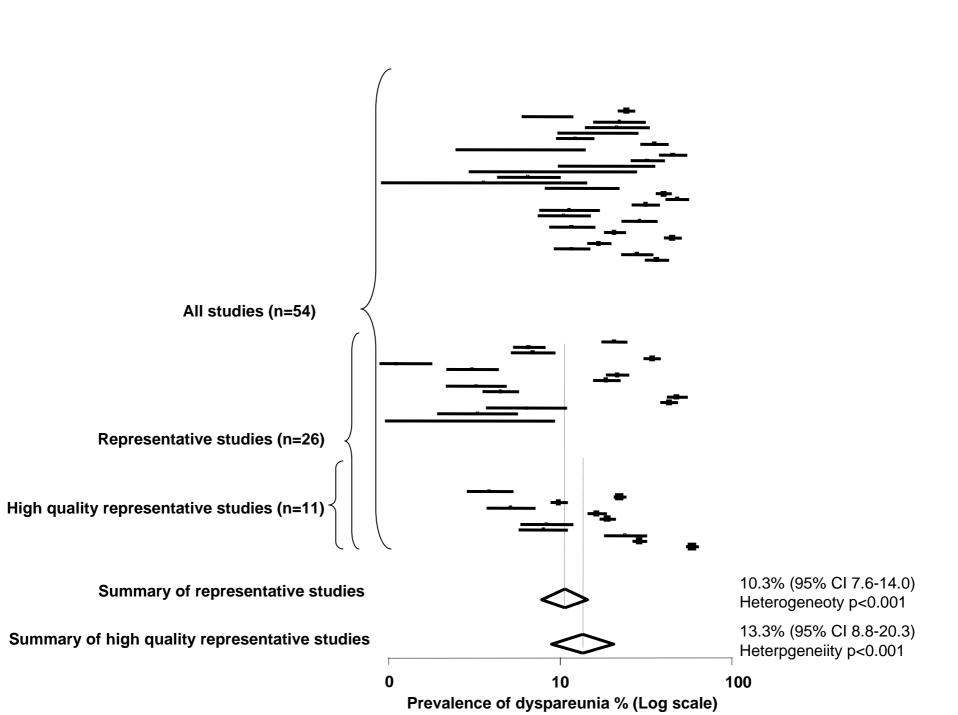
Quality of prevalence studies

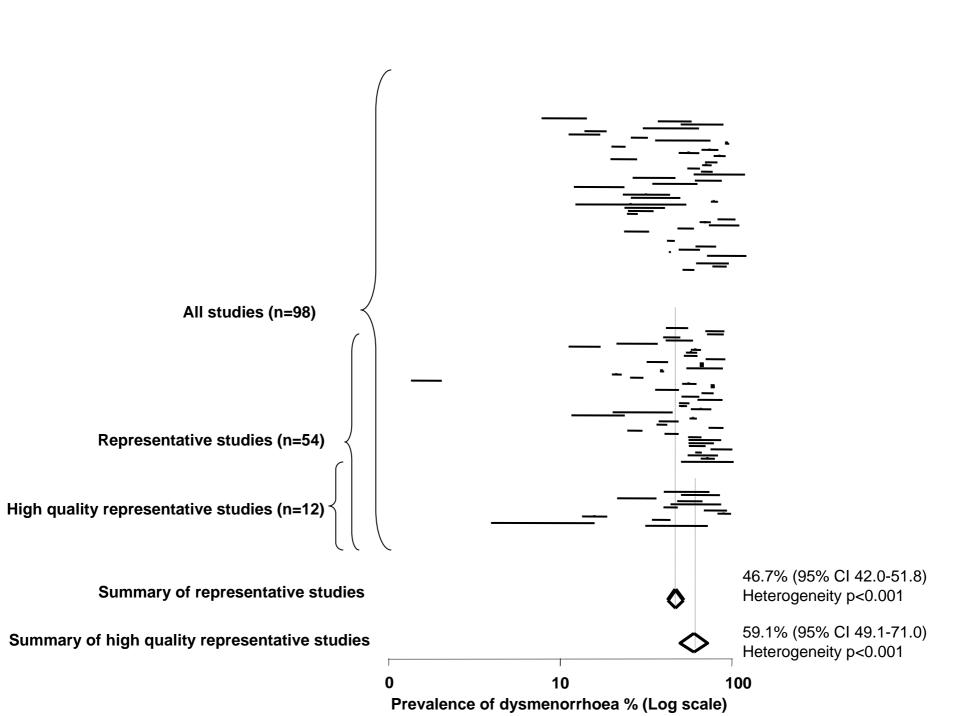


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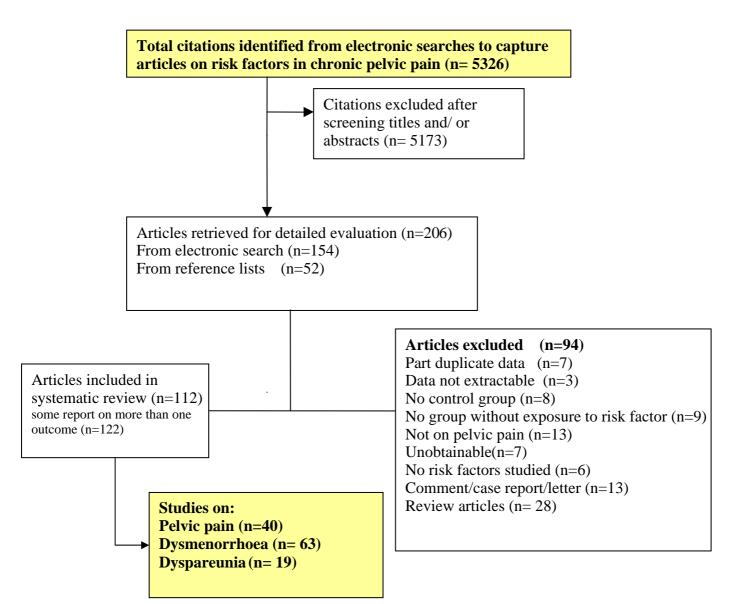
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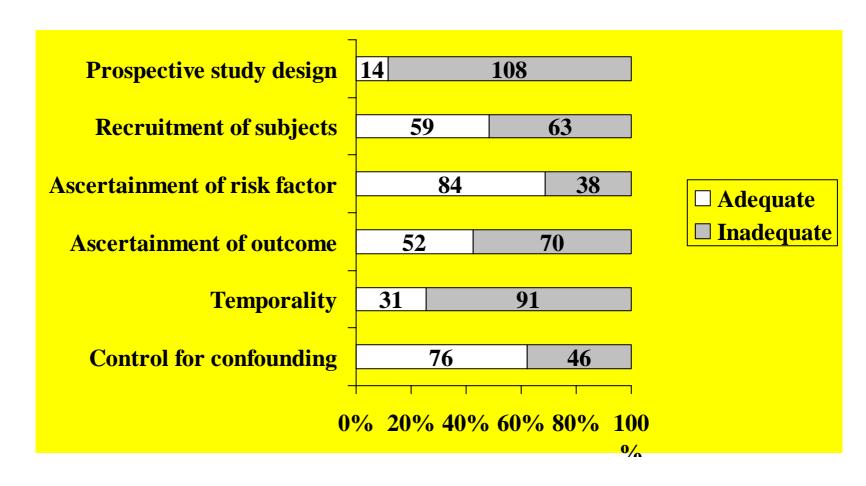
Review Question - aetiology

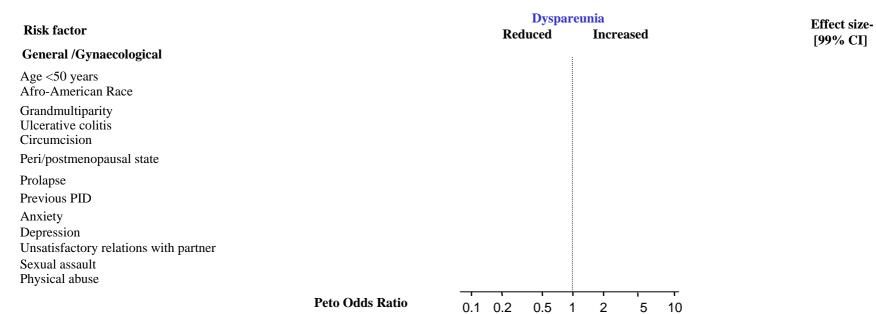
- **Population:** women at risk
- Risk factors:
 - General factors
 - Gynaecological/obstetric factors
 - Psychological and social factors
- Outcomes: Noncyclical CPP, dysmenorrhoea and dyspareunia

Study identification and selection



Quality of aetiology studies





D' 1 6 4	no. of	no. of women	Dyspareunia	Effect size-
Risk factor	studies		Reduced Increased	[99% CI]
General /Gynaecological				
Age <50 years	4	5524	•	1.44 [1.14, 1.83]*
Afro-American Race	1	580		1.67 [1.02, 2.72]
Grandmultiparity	1	136		1.18 [0.48, 2.91]
Ulcerative colitis	1	78		2.53 [0.70, 9.19]
Circumcision	2	2078		1.68 [0.98, 2.88]
Peri/postmenopausal state	3	3412	~	1.52 [1.22, 1.89]
Prolapse	1	62		0.98 [0.20, 4.84]
Previous PID	2	1558		9.98 [4.69, 21.2]
Anxiety	1	650		3.23 [1.76, 5.94]
Depression	1	593		7.77 [2.56, 23.6]
Unsatisfactory relations with partner	1	645		1.43 [0.73, 2.80]
Sexual assault	5	6623	•	2.67 [2.16, 3.29]
Physical abuse	1	90		1.20 [0.32, 4.53]
	Peto Odds R	atio	0.1 0.2 0.5 1 2 5	T 10

Risk factor	or no. of no. of Dysmenorrhoea			Effect	Effect size			
General	studies	womer	1	Reduced	Increase	d	measure	[99% CI]
General					:			
Age < 30 years	3	1746			~		Peto OR	1.89 [1.36, 2.63]
Height	1	204			.		SMD	0.36 [0.03, 0.69]
Weight	2	454			Ø		SMD	0.11 [-0.10, 0.31]
Low BMI	5	14276			~		Peto OR	1.42 [1.26, 1.59]
High BMI	4	14587			\Leftrightarrow		Peto OR	1.07 [0.96, 1.19]*
Marriage	4	16331			◆		Peto OR	0.90 [0.82, 1.00]*
Education < 12 years	2	14917			\Leftrightarrow		Peto OR	1.23 [0.97, 1.56]
Employment	1	662			\Leftrightarrow		Peto OR	1.15 [0.77, 1.73]
High socio-economic status	3	6878			\Diamond		Peto OR	1.12 [0.98, 1.27]*
Caucasian race	1	170		~			Peto OR	0.93 [0.48, 1.79]
Smoking	11	7757			•		Peto OR	1.37 [1. 19, 1.57]
Passive smoking	2	1045					Peto OR	1.44 [0.91, 2.3]
Alcohol	6	15268			\Diamond		Peto OR	0.96 [0.88, 1.05]
Athletic sports	10	13735					Peto OR	0.89 [0.80, 1.00]*
Occupational exposures	5	2555				•	Peto OR	2.12 [1.67, 2.68]
Exposure to cold	2	812				-	Peto OR	2.20 [1.31, 3.70]
Gynaecological		.=					Peto OR	
Oral contraception	10	17064		•			Peto OR	0.65 [0.60, 0.71]*
Intrauterine device Sterilisation	3 5	1935 3881					Peto OR	1.13 [0.87, 1.48]
Early Menarche							d	1.35 [1.04, 1.75]
Long menstrual cycle (>31 days)	6	1386					d	0.18 [0.06, 0.29]*
	5	901					Peto OR	0.14 [-0.04, 0.32]* 2.02 [1.19, 3.44]
Irregular menstrual cycles Heavy menstrual blood loss	2	635					d	
Duration of menstrual flow (>5 days	6	1576				-	d d	0.42 [0.28, 0.55]
Abortion/miscarriage	6	665					Peto OR	0.61 [0.54, 0.69]
Nulliparity	3	504					Peto OR	1.18 [0.74, 1.87]
Involuntary infertility	6	2758 76					Peto OR	1.53 [1.28, 1.82]*
PID in the past	2	1553					Peto OR	1.51 [0.46, 4.9] 1.58 [1.09, 2.30]
Premenstrual symptoms	6	819					d	0.44 [0.31, 0.57]
Glutathione S transferase mutation	1	365					Peto OR	1.73 [0.76, 3.97]
CYP2D6 polymorphism	1	357					Peto OR	1.65 [0.78, 3.49]
Psychological						_		
Sexual abuse	3	5365				-	d	0.61 [0.54, 0.69]
Psychological morbidity	6	1342			-		d	0.50 [0.34, 0.65]
	SMD/ V	SMD/ WMD Peto Odd Ratio Effect size d		-5	0	5		
				1 1	- j	•		
				0.2 0.5	1 2	5	10	
	•	LILOU DIEU U	-1.0	- 0.5 -0.2	0 0.2	0.5	- 1 1.0	
				0.0 0.2	U. Z	0.0		

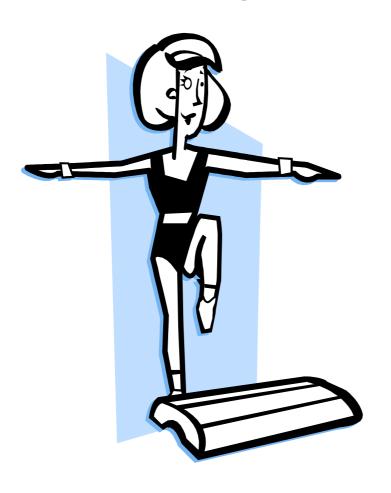
 $[\]verb|^{(}depression, somatisation, extraggression, emotional difficulties, suicidal\ tendency)|$

Risk factors for dysmenorrhoea

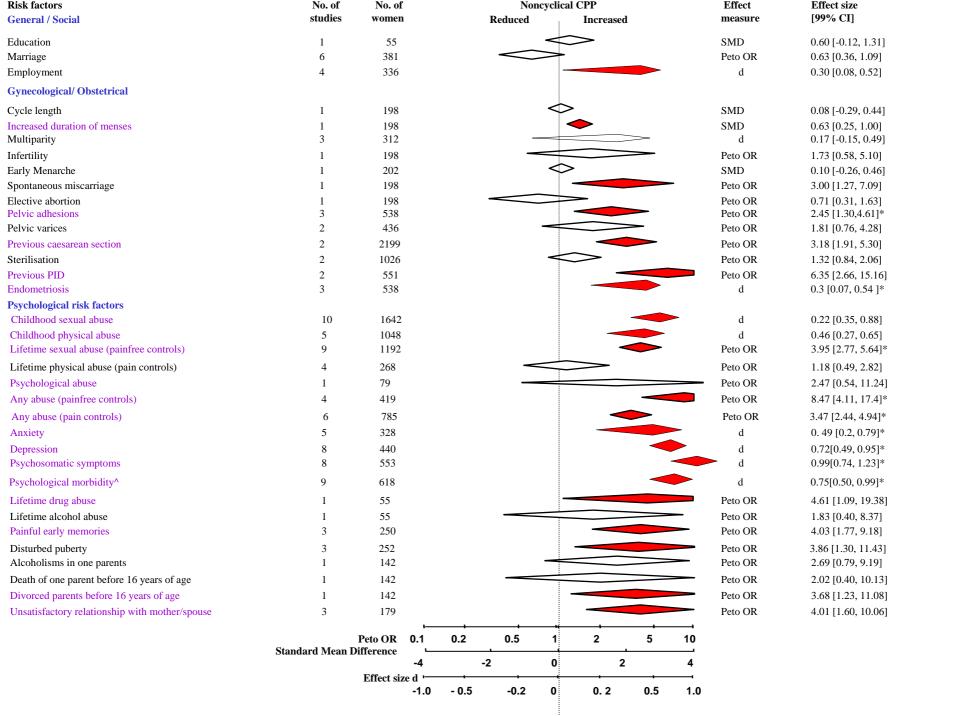


- Age <30 years</p>
- Low BMI (<19)
- Smoking
- Occupational exposures
- Early menarche (<12 yrs)
- Heavy menstrual blood flow
- Long /irregular menstrual cycles
- PID
- PMS
- Sexual abuse
- Psychological morbidity

Protective factors in dysmenorrhoea



- Oral contraceptives
- Physical exercise
- Marriage/stable relationship



Risk factors for noncyclical pelvic pain

Noncyclical CPP-

- Pelvic adhesions, previous LSCS, PID, endometriosis
- Abuse
- Psychological morbidity including anxiety, depression and somatisation

Aetiology - conclusion

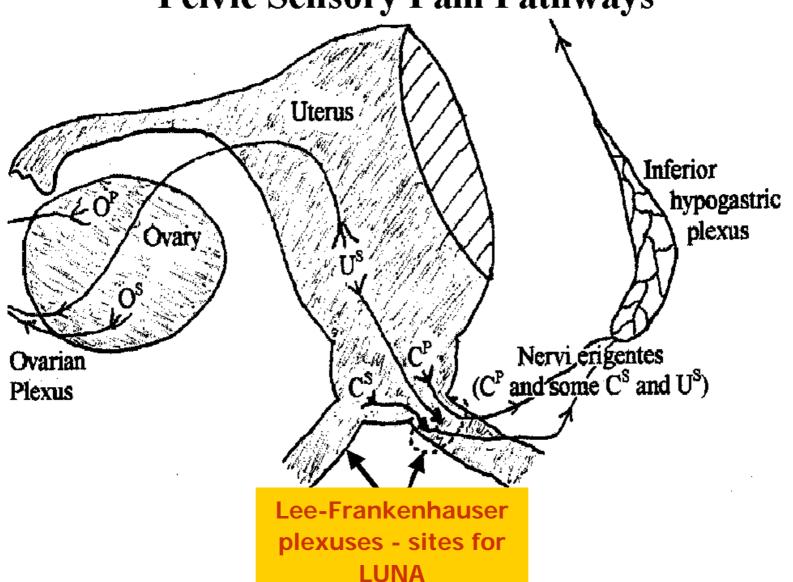
Risk factor	no. of studies	no. of women	Any C Reduced	PP Increased		Effect size [99% CI]
Pathology	11	4780		•		0.24 [0.16, 0.32]
Abuse	19	9865		•		0.32 [0.25, 0.38]
Psychological morbidity	13	2360		•		0.51 [0.38, 0.64]
	Effect size d	-1.5 -1.0	- 0.5 -0.2 0	0. 2 0.5	1.0 1.5	

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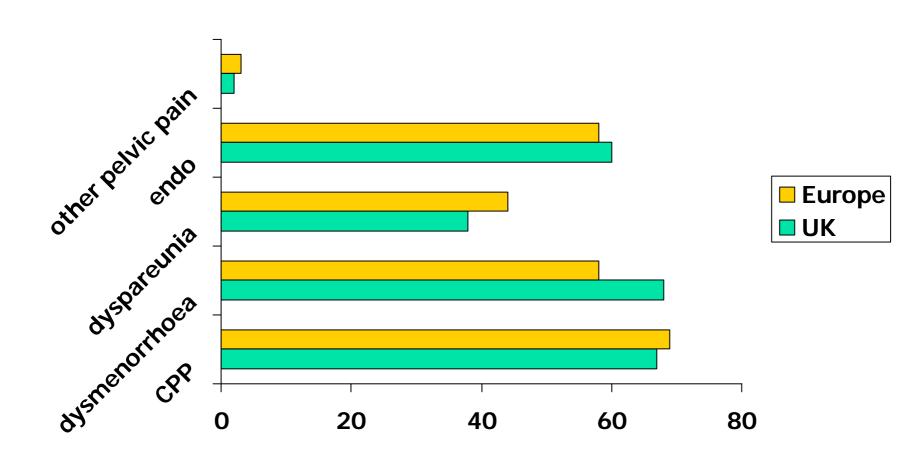
LUNA

Pelvic Sensory Pain Pathways

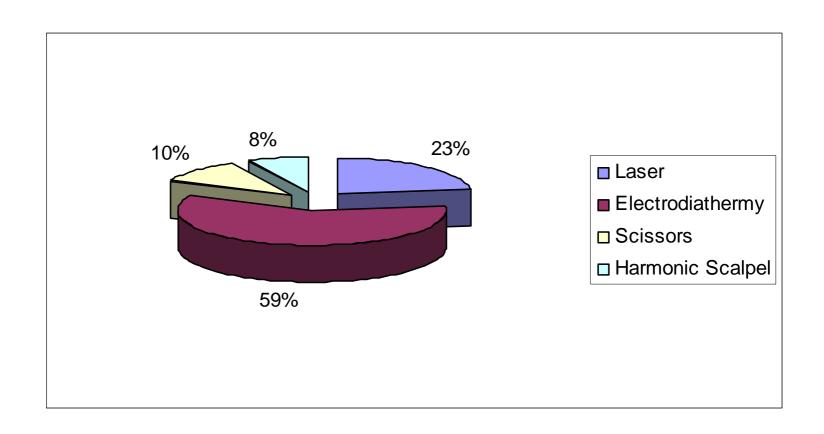




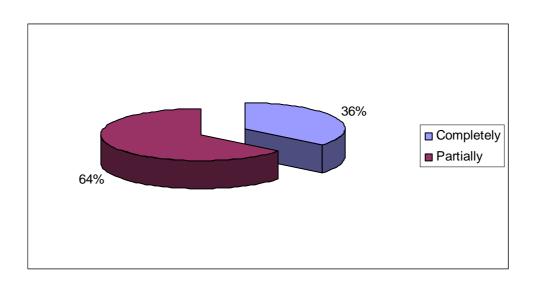
Indications for LUNA



LUNA: Survey of practice 2002

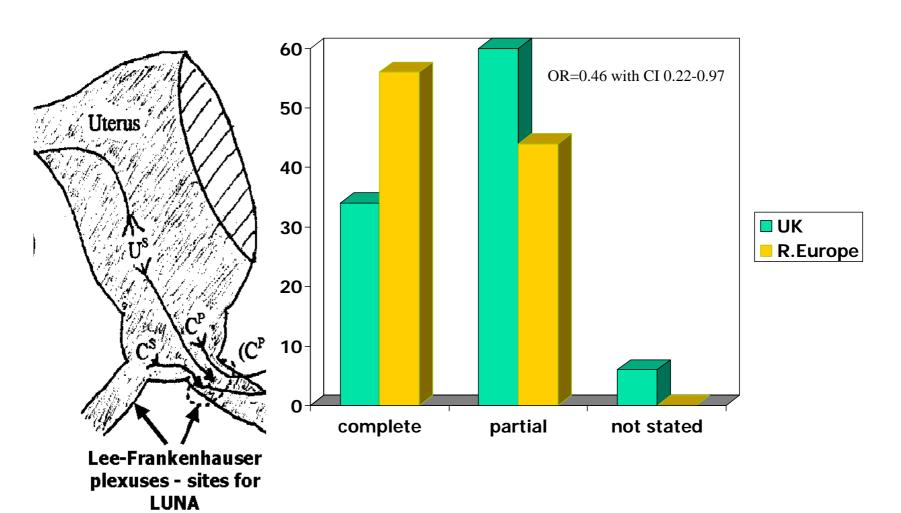


LUNA: Survey of practice 2002

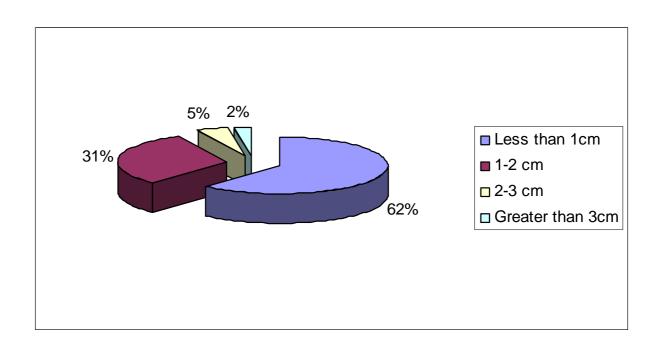


How Uterosacral Ligaments are Transected

Depth of Transection of USL

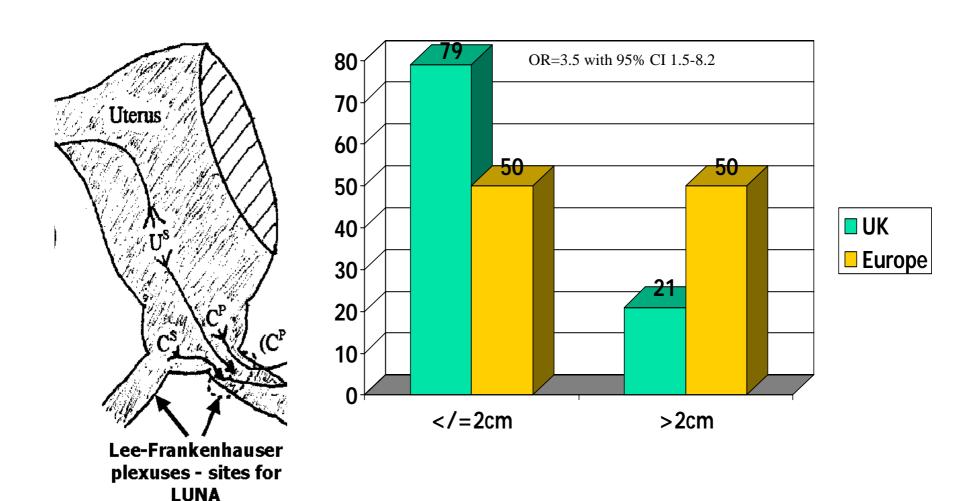


LUNA: Survey of practice 2002

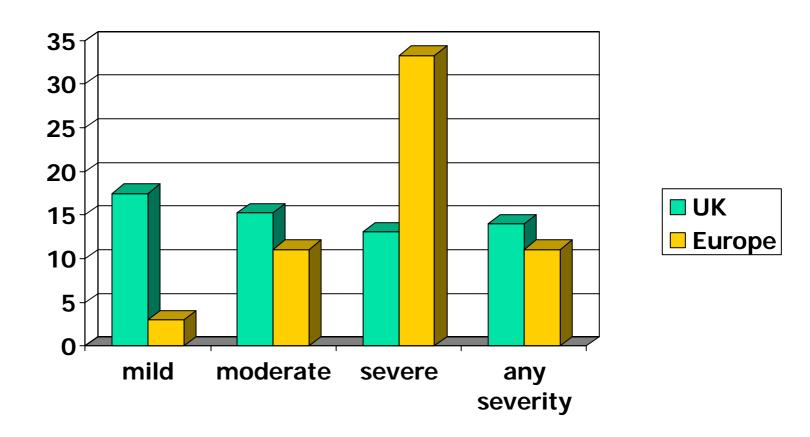


Site at which Uterosacral Ligaments are Transected

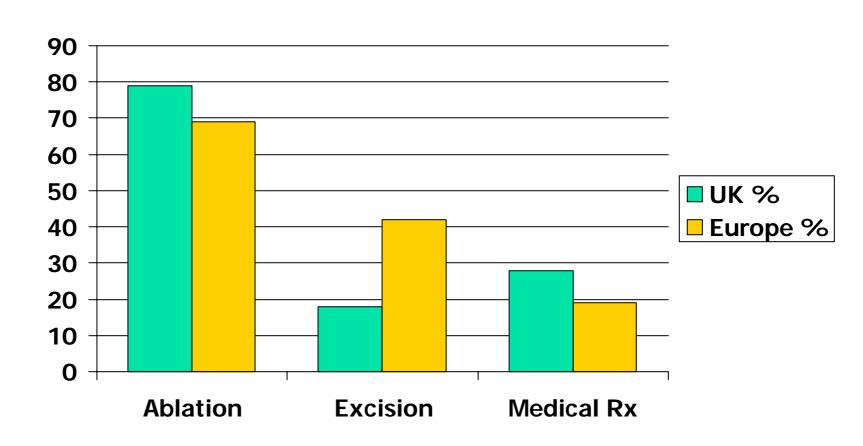
Distance of USL transection



LUNA in endometriosis



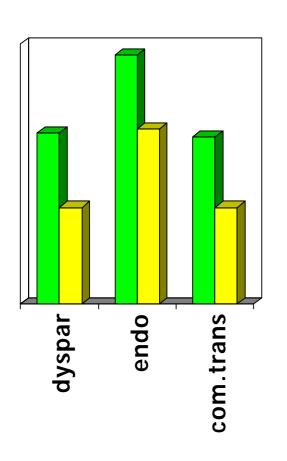
Treatment of minimal-mild endometriosis



Comparison by operator experience

■ > 20

□ < 20

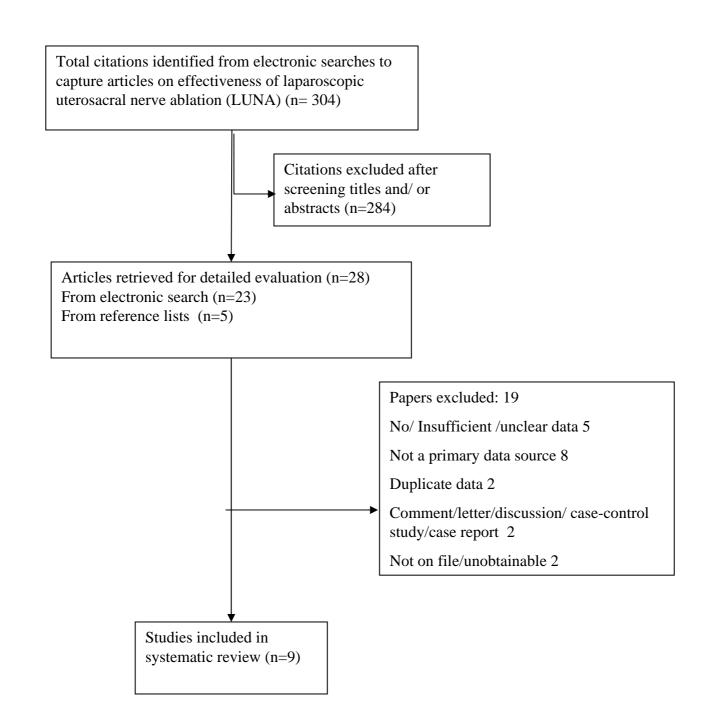


More experienced surgeons:

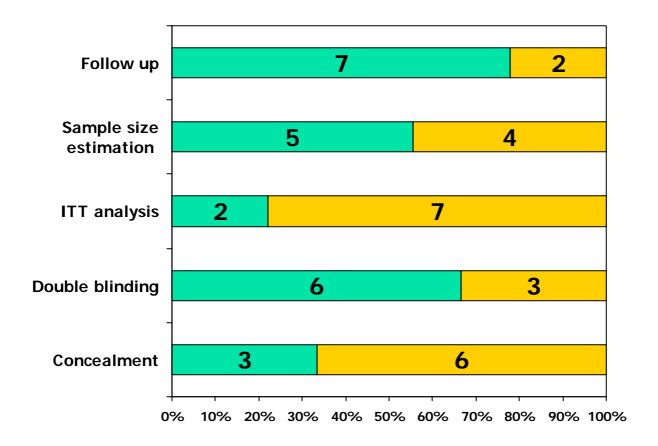
- Dyspareunia (46% vs.26%;
 OR=2.5; 95% CI 1.2-5.4)
- Endometriosis (67 vs. 47%;
 OR=2.3; 95% CI 1.2-4.7)
- Complete transection (45% vs. 26%; OR=2.3 95% CI 1.1-4.9)

Review Question - therapy

- **Population:** women at risk
- Interventions:
 - LUNA
 - PSN
 - Laparoscopy only
- Outcomes: Dysmenorrhoea



Quality of trials



■ Adeqate
■ Inadequate

Odds ratios (95% confidence interval)

1.43 (0.56, 3.69)

0.67 (0.17, 2.61)

1.03 (0.52, 2.02)

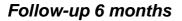
4.52 (1.84, 11.09)

0.77 (0.43, 1.39)

3.14 (1.59, 6.21)

0.84 (0.39, 1.8)

Primary dysmenorrhea



LUNA vs. control (2 studies, 68 women)

LUNA vs. LPSN (1 study, 68 women)

Follow-up 12 months

LUNA vs. control (2 studies, 68 women)

LUNA vs. LPSN (1 study, 68 women)

6.12 (1.78, 21.03) 0.10 (0.03, 0.32)

Secondary dysmenorrhea

Follow-up 6 months

LUNA vs. control (3 studies, 190 women)

PSN vs. control (1 study, 126 women)

Follow-up 12 months

LUNA vs. control (2studies, 217 women)

PSN vs. control (2 studies, 197 women)

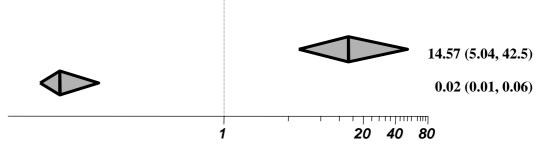
Follow-up 36 months

LUNA vs.control (1 study, 116 women)

Safety*

PSN vs. Control*

LUNA vs. LPSN*



Favours Control or LPSN

Favours LUNA or PSN

LUNA Summary

Variation in practice

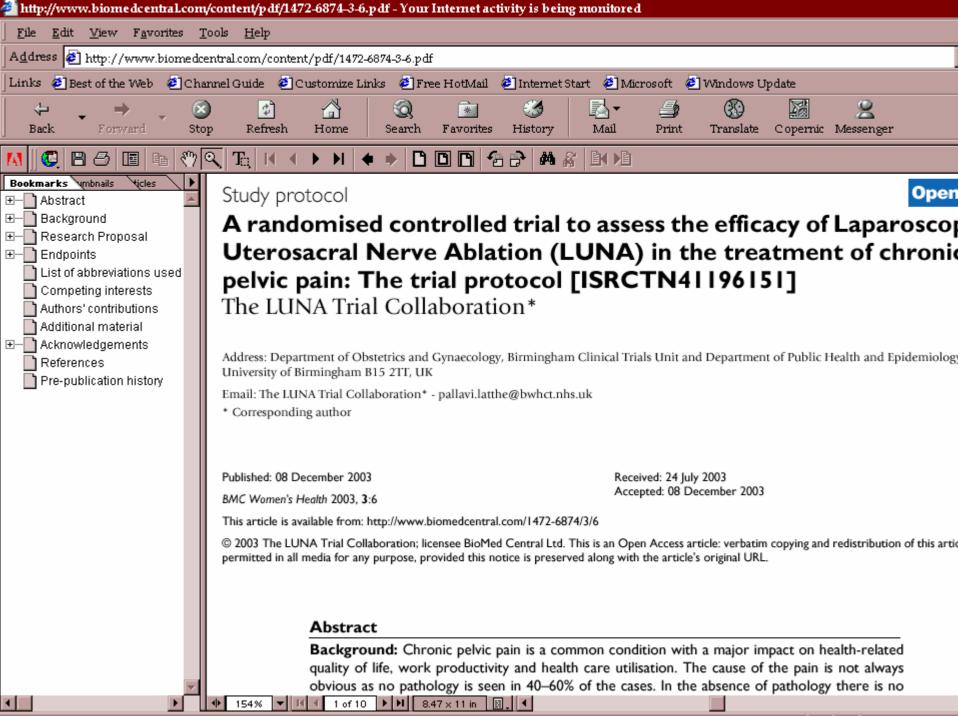
Variations in use

Variations in indications

Variations in surgical technique

Equipoise

LUNA has been introduced into practice but opinion about its use is not yet solidified





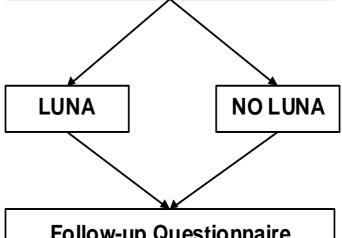
TRIAL SCHEMA

Identification of eligible patient

- •Chronic pelvic pain >6mth
- Diagnostic laparoscopy planned

During diagnostic laparoscopy

- No obvious pathology
- Technically feasible
 - Randomisation



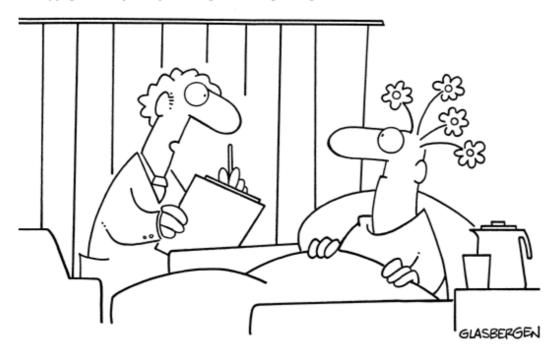
Follow-up Questionnaire at 3, 6, 12, 24, 36 months

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"Due to cutbacks and restrictions, we have to do stem cell research with flower stems."



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