

出國報告(出國類別：開會)

## 2012 年美國 骨盆疼痛學會 國際年會

服務機關：國防醫學院三軍總醫院

姓名職稱：張芳霖、林信隆 主治醫師

派赴國家：美國

報告日期：101 年 11 月 01 日

出國時間：101 年 10 月 17 日至 10 月 22 日

## 摘要

慢性骨盆疼痛是擾人的婦女疼痛，其成因常為子宮內膜異位症、膀胱炎、直腸方面疾患所致，病人也常常合併頭痛、腹瀉、便秘。有些病人也會被性交疼痛所困擾，西方民風較為開放，所以症狀較為完整呈現，然而較亞洲民族較為保守，故而症狀與流行率似乎較西方民族為低，所幸隨著時代進步，東方人對於自身的身體症狀也逐漸覺醒，所以個人在疼痛門診之中，有 40 - 50 歲女性患者，自主性較強的病人會說的比較多此類症狀。爰此類病人事實上存在，但是囿於疼痛治療的醫師在台灣屬於少數，而專研於骨盆疼痛的醫師自是更少，國軍官兵之中，女性軍人愈來愈多，軍眷族群原也是軍醫服務對象，所以個人遂以此為核心，前往芝加哥參與此次疼痛年會之海報發表與研討，也帶回觀念與技術，希望提供門診病人更完整的照顧品質。

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# 本文

## 目的

將世界上每年度一次之骨盆疼痛醫學研討的內容與新知，學習內化，提昇門診病患與國軍疼痛醫療處理的品質。

## 過程

2012 - 10 - 17 搭長榮經濟艙出發，Oct 18, 2012 凌晨抵芝加哥，經過約 40 分鐘車程終抵大會會場旁邊的住宿旅館，稍事盥洗與休息，前往大會會議場所(The Palmer House Hilton)報到，本回議程主要是討論基礎課程(Basic Course)，首先邀請演講由 Wisconsin 醫學院 Dr. Chelimsly 講解慢性疼痛的生理機轉，次由丹佛醫學院(Denver medical center)Dr. Witzeman 講解慢性骨盆疼痛的必要元素，也由 Dr. Shin(Albert Einstein College)講解婦科檢查的必要重點項目，特別的是邀請職能復健專家(Physical+therapy)Hartmann 女士講解在慢性骨盆疼痛之中所需使用的各項物理復健的動作與姿勢，大會並且徵求會員與與會人員於第三日清晨 0630 開始會前瑜珈，課程教育，透過專業人員教導，使我們身體親自感受瑜珈所帶來生理上的舒緩，當然我與張醫師也是努力去感受這種較為柔性的治療方式。因為以往國內疼痛治療方式與項目多為藥物、神經阻斷，或者復健等方式，瑜珈的應用也說明中國傳統醫學的經絡理論，似乎與之互相呼應。

會中婦產科醫師報告的議題，顯然是大宗，因為子宮內膜異位症是誘發子宮所在地骨盆腔慢性疼痛的主要原因，大會會長本身也是婦產科醫師，他也提供數個危險因子的診斷與預後分析因子，有助此類疾病的診斷，當然西方女權平等，泌尿科之陰道疼痛也是會中大量被討論的主題，其中來自 North Shore University 之 Dr. Tu 提供生動有趣的會議互動問答，令人印象深刻。另外大會也邀請骨骼肌肉專家(復健專家)說明肌肉骨骼方面的病生理機制，另外也提供腸道疾患的診斷專題演講，來自大腸以及小腸的訊號，對於骨盆疼痛的角色也是非常重要。因為腸腔分泌的激素與神經路徑的迴饋，同樣會誘發慢性骨盆疼痛。

課中穿插四場海報新知報告與討論，個人覺得是大會的高潮與價值。透過海報，各地臨床工作者互相詢問，過招，我也從中與許多報告者獲益許多，除了診斷的訊息與速度更為快速、精準之外，治療技術也因為已經從事數年的基礎，所以進行陰部神經減敏阻斷，就覺得可以快速學習到他們的小秘訣，當然，我也分享了許多自身的心得。我的海報主題是利用不同鴉片類阻斷劑來增強慢性疼痛治療者長期使用嗎啡的止痛效果。來自貝勒醫學中心的官醫師對我的內容非常感興趣。同行的張醫師則是將局部麻醉劑 Lidocaine 靜脈滴注的方式應用於手術中與術後止痛，同樣也獲得許多人的注意眼光。大會結尾特地安排肛門疼痛的主題作為結尾，主題與解剖結構互相呼應，同樣饒富趣味，肛門雖小，卻承載骨盆底的壓力，所以在神經病理學的診斷也需分辨是前列腺或卵巢或子宮或直腸或淋巴抑或血管來源疼痛，內容精采。

## 2012 IPPS 宗旨

- Anatomy Overview 知識
- Why and How to Evaluate Chronic Female Pelvic Pain 如何診斷
- Visceral Pain - IBS/IC 內臟疼痛
- Vulvar Pain 陰部疼痛
- Nursing and Office Management 護理復建
- Surgical Management 外科處置
- Medical and Complementary Management of Chronic Pelvic Pain 藥物與替代療法
- Endometriosis 子宮內膜異位症
- Musculoskeletal Disorders and the Role of Manual Medicine 肌肉骨骼與復建



大會會長 DR Lorimer Moseley, PhD, B. App Sc



Palmer House Hilton in Chicago. DR Stephanie  
presentation of causes of manual medicine for CPP.

## 心得與建議

1. 本次會議內容說明疼痛治療為多面向的治療，本院也以順應治療趨勢，於去年成立整合疼痛治療中心，多科整合。
2. 治療儀器的需求日新月異，盲目穿刺的世紀顯然結束，必須輔以高解析度的超音波或電腦斷層或 X 光設備，方可提昇治療的安全性。
3. 本次心得最強烈是針灸、復健等方式早早已是整合式治療的一環，所幸我們的腳步也算同步齊驅。
4. 疼痛治療需要投入人力與資源，建議未來衛生署在分科資源與健保規範內能確立其角色，協助成長，以目前學會的統計不到一千位的疼痛科醫師實不足以提供質上的改善。
5. 謝謝軍醫局的協助，俾使個人有機會參與此次年會，未來將持續進步，回饋病患品質更好的照護。

# Program Schedule

bulbo spinal

**Thursday, October 18, 2012**

10 a.m. – 7:50 a.m. **Continental Breakfast**  
Location: Adams Foyer

Δ ~~TRPV~~ TRPV, TRPV1,  
Δ TRPVs not only UA contraction  
but also pain

10 a.m. – 5:00 p.m. **Registration/Information Desk Open**  
Location: Adams Foyer

Δ Dysmenorrhea might be  
visceral allodynia

1000 a.m. – 5:30 p.m. **Exhibit Hall Open**  
Location: Monroe Ballroom

~~CBO047~~

10 a.m. – 8:05 a.m. **Welcome from the Basics Course Chair**  
Sawsan As-Sanie, MD, MPH  
University of Michigan  
Ann Arbor, MI

Visceral Motor Reflex

L-spine ←  
neuropathy ? → RT  
(+)

15 a.m. – 8:35 a.m. **Introduction to the Physiology of Chronic Pain**  
Thomas C. Chelmsky, MD  
Medical College of Wisconsin  
Milwaukee, WI

← EA  
? Caudal

5 a.m. – 8:40 a.m. **Q&A**

Perreira 2009

0 a.m. – 9:50 a.m. **Evaluation of the Chronic Pelvic Pain Patient**

8:40 a.m. – 9:00 a.m. **Part I: Essential Elements of the History**  
Kathryn M. Witzeman, MD  
Denver Health Medical Center  
Denver, CO

Δ Electrical stimulation

← Raphe magnus  
paraventricular

9:00 a.m. – 9:05 a.m. **Q&A**

9:05 a.m. – 9:25 a.m. **Part II: Essential Elements of the Gynecologic Exam**  
Ja Hyun Shin, MD  
Albert Einstein College of Medicine  
Bronx, NY

Sanoja 2010

Δ Opioid ↓ raphe magnus  
response to

9:25 a.m. – 9:30 a.m. **Q&A**

9:30 a.m. – 9:50 a.m. **Part III: Essential Elements of the Musculoskeletal Exam**  
Elizabeth Dee Hartmann, PT, DPT  
Dee Hartmann Physical Therapy for Women  
Chicago, IL

colorectal distension  
(visceral stimulus)

~~CBO047~~

↓  
Cox2i

↓ ↓ visceral  
sensation

0 a.m. – 10:00 a.m. **Q&A**

00 a.m. – 10:20 a.m. **Break**  
Location: Monroe Ballroom

Δ Ischemic → TRPV upregulation

20 a.m. – 11:00 a.m. **Diagnosis and Treatment of Gynecologic Causes of Chronic Pelvic Pain**  
Matthew T. Siedhoff, MD, MSCRN  
University of North Carolina  
Chapel Hill, NC

Raphe magnus → control UA  
contractility and perfusion



11:00 a.m. – 11:05 a.m.

**Q&A**

*Pelvic stimulate  
pfs, pressure, lechner*

11:05 a.m. – 11:35 a.m.

**Diagnosis and Treatment of Vulvar Pain**

Frank Tu, MD, MPH  
North Shore University Health System  
Evanston, IL

*bulbospongiosus*

11:35 a.m. – 11:40 a.m.

**Q&A**

*Vulvar pain*

11:40 a.m. – 12:10 p.m.

**Diagnosis and Treatment of Abdominal and Pelvic Peripheral Neuropathies**

Mario Castellanos, MD  
Dignity Health  
Phoenix, AZ

*E2 → Heat shock*

12:10 p.m. – 12:20 p.m.

**Discussion**

**CB0047**

*heat sensitivity impact.*

12:20 p.m. – 1:20 p.m.

**Lunch (on your own)**

*estrogen receptor α*

*Δ E2 = local & systemic effect*

1:20 p.m. – 1:50 p.m.

**Diagnosis and Treatment of Urologic Causes of Chronic Pelvic Pain**

Barry K. Jarnagin, MD  
Center for Pelvic Health  
Franklin, TN

*Δ*

1:50 p.m. – 1:55 p.m.

**Q&A**

1:55 p.m. – 2:35 p.m.

**Diagnosis and Treatment of Musculoskeletal Causes of Chronic Pelvic Pain**

Brandi Kirk, PT, BCB-PMD  
Kirk Center for Healthy Living  
Lockport, IL  
Colleen Fitzgerald, MD  
Rehabilitation Institute of Chicago  
Chicago, IL

2:35 p.m. – 2:40 p.m.

**Q&A**

2:40 p.m. – 3:10 p.m.

**Diagnosis and Treatment of Functional Bowel Disorders**

Alain Watier, MD  
Centre Hospitalier Universitaire Sherbrooke  
Sherbrooke, Quebec, Canada

3:10 p.m. – 3:20 p.m.

**Discussion**

3:20 p.m. – 3:40 p.m.

**Break**

*Location: Monroe Ballroom*

3:40 p.m. – 4:20 p.m.

**Medical and Behavioral Therapies for Chronic Pain**

Devon M. Shuchman, MD  
University of Michigan  
Ann Arbor, MI

**CB0047**

4:20 p.m. – 4:25 p.m.

**Q&A**

25 p.m. – 5:00 p.m. **Psychological Aspects of Living with Chronic Pelvic Pain: Evaluation and Treatment of Comorbid Anxiety and Depression**  
Sarah M. Fox, MD  
Women & Infants' Hospital of Rhode Island  
Providence, RI

30 p.m. – 9:00 p.m. **IPPS Board of Directors Meeting**  
Location: *The Hancock Parlor*

Friday, October 19, 2012  
00 a.m. – 7:50 a.m. **Continental Breakfast in Exhibit Hall**  
Location: *Monroe Ballroom*

*8-11<sup>00</sup>*  
*3-16*

*0630-0700 (part) RE poster*

00 a.m. – 7:00 p.m. **Exhibit Hall Open**  
Location: *Monroe Ballroom*

**CB0047**

*084: Fri 1030*

00 a.m. – 5:30 p.m. **Registration/Information Desk Open**  
Location: *Adams Foyer*

*AM 1045-1115*  
*PM 325-355*  
*PM 4-5*

50 a.m. – 8:00 a.m. **Welcome from the Scientific Program Chair**  
Stephanie Prendergast, MPT  
Pelvic Health & Rehabilitation Center  
San Francisco, CA

*even pm 4-5 RE.*

00 a.m. – 8:10 a.m. **Presidential Address**  
Georgine Lamvu, MD, MPH  
Advanced Minimally Invasive Surgery and Gynecology  
Specialists  
Orlando, FL

10 a.m. – 9:05 a.m. **James E. Carter Memorial Lecture: An Update on the Pathogenesis and Treatment of Endometriosis**  
Erkut Attar, MD  
Istanbul University Medical Center  
Istanbul, Turkey

05 a.m. – 9:45 a.m. **Innovative Injection Therapies for Pain Syndromes of Pelvic Floor Fascia**  
Hal Blatman, MD  
Blatman Pain Clinic  
Cincinnati, Ohio

45 a.m. – 10:25 a.m. **The Acute Anus**  
Dana Hayden, MD, MPH  
Loyola University Medical Center  
Chicago, IL

**CB0047**

0:25 a.m. – 10:45 a.m. **Discussion**

0:45 a.m. – 11:15 a.m. **Break & Poster Session I in Exhibit Hall**  
Location: *Monroe Ballroom*

1:15 a.m. – 12:30 p.m. **Clinical Updates and Latest Research**

11:15 a.m. – 11:35 a.m. **Irritable Bowel Syndrome**  
Alain Watier, MD  
Centre Hospitalier Universitaire Sherbrooke  
Sherbrooke, Quebec, Canada

11:35 a.m. – 11:55 a.m. **Vulvodynia**  
Andrea Rapkin, MD  
David Geffen School of Medicine at UCLA  
Los Angeles, CA

11:55 a.m. – 12:15 p.m. **Interstitial Cystitis**  
Nel E. Gerig, MD  
The Pelvic Solutions Center  
Denver, CO

12:15 p.m. – 12:30 p.m. **Discussion**

12:30 p.m. – 2:00 p.m. **Lunch (on your own)**

2:00 p.m. – 3:25 p.m. **Translational Science Symposia - Part 1**

2:00 p.m. – 2:40 p.m. **Visceral Pain Models**  
Kevin Hellman, PhD  
North Shore University Health System  
Evanston, IL

2:40 p.m. – 3:10 p.m. **Vulvar Pain Mechanisms**  
Melissa Farmer, PhD  
McGill University  
Montreal, Quebec, Canada

3:10 p.m. – 3:25 p.m. **Discussion**

3:25 p.m. – 3:55 p.m. **Break & Poster Session I in Exhibit Hall**  
*Location: Monroe Ballroom*

3:55 p.m. – 5:10 p.m. **Translational Science Symposia - Part 2**

3:55 p.m. – 4:25 p.m. **Dyspareunia in Women With Cancer**  
Stacy T. Lindau, MD, MAPP  
The University of Chicago  
Chicago, IL

4:25 p.m. – 4:55 p.m. **Neurobiology of Complex Painful Dysautonomias**  
Thomas C. Chelmsky, M.D.  
Medical College of Wisconsin  
Milwaukee, WI

4:55 p.m. – 5:10 p.m. **Discussion**

5:10 p.m. – 7:00 p.m. **Welcome Reception & Poster Session II in Exhibit Hall**  
*Location: Monroe Ballroom*

172,28,161,193

**aturday, October 20, 2012**

**6:15 a.m. – 7:15 a.m.**

**Yoga Class**

*Location: Chicago Room*

**7:00 a.m. – 7:50 a.m.**

**Continental Breakfast in Exhibit Hall**

*Location: Monroe Ballroom*

**8:00 a.m. – 11:00 a.m.**

**Exhibit Hall Open**

*Location: Monroe Ballroom*

**8:00 a.m. – 5:30 p.m.**

**Registration/Information Desk Open**

*Location: Adams Foyer*

**8:50 a.m. – 8:00 a.m.**

**Welcome and Announcements**

Stephanie Prendergast, MPT

Pelvic Health & Rehabilitation Center

San Francisco, CA

**8:00 a.m. – 8:55 a.m.**

**C. Paul Perry Memorial Lecture: Rethinking Pelvic Pain – Lessons From Two Decades of Explaining Pain**

Lorimer Moseley PhD, B.App.Sc.(Phy)(hons)

University of South Australia

Adelaide, Australia

**9:55 a.m. – 9:35 a.m.**

**Simultaneous Pelvic Floor Physical Therapy and Functional Brain Imaging: Applications to Mind-Body Interactions in Chronic Pain**

Daniel Kirages, DPT, OCS, FAAOMPT

University of Southern California

Los Angeles, CA

Jason Kutch, PhD

University of Southern California

Los Angeles, CA

**10:35 a.m. – 10:15 a.m.**

**Optimizing Organ-Related Pelvic Pain: Making A Difference With Visceral Manipulation**

Gail Wetzler, RPT, CVMI

Wetzler Integrative Physical Therapy Center

Newport Beach, CA

**10:15 a.m. – 10:30 a.m.**

**Discussion**

**11:00 a.m. – 11:00 a.m.**

**Break & Poster Session II in Exhibit Hall**

*Location: Monroe Ballroom*

**11:00 a.m. – 11:40 a.m.**

**Opioids: Part of a Poly-modal Pain Treatment: Which Patient, Which Drug, and Patient Monitoring**

Robert L. Barkin, PharmD

University Pain Centers

Rush Oak Park Hospital

Oak Park, IL

**11:40 a.m. – 12:10 p.m.**

**Hysterectomy Differential Diagnosis**

Joseph M. Maurice, MD

Rush University Medical Center

Chicago, IL

12:10 p.m. – 12:25 p.m.

Discussion

12:25p.m. – 1:40 p.m.

Lunch (on your own)

1:40 p.m. – 2:20 p.m.

**The Management of Chronic Pelvic Pain: Neuromodulation and Other Novel Techniques**

Kenneth Peters, MD  
William Beaumont Hospital  
Royal Oak, MI

2:20 p.m. – 3:00 p.m.

**Nutritional Considerations in Treating Patients With Pain**

Geeta Maker-Clark, MD  
Northshore Medical Group  
Evanston, IL

3:00 p.m. – 3:10 p.m.

Discussion

3:10 p.m. – 3:30 p.m.

Break

*Location: Adams Foyer*

3:30 p.m. – 4:10 p.m.

**Medical Management of Sexual Dysfunction/Pelvic Pain**

Susan Kellogg-Spadtt, CRNP, PhD  
The Pelvic and Sexual Health Institute  
Philadelphia, PA

4:10 p.m. – 4:40 p.m.

**Leveraging the Intersection Between Sexuality and Chronic Pelvic Pain in Treatment Design**

Heather Howard, MBA, PhD, ACS  
The Center for Sexual Health and Rehabilitation  
San Francisco, CA

4:40 p.m. – 5:00 p.m.

Discussion

5:00p.m. – 5:10 p.m.

Closing Remarks

5:10 p.m. – 5:30 p.m.

**Annual Business Meeting**

*Location: Adams Ballroom*

**Sunday, October 21, 2012**

7:00 a.m. – 5:00 p.m.

**Registration/Information Desk Open**

*Location: Adams Foyer*

7:00 a.m. – 7:50 a.m.

**Continental Breakfast**

*Location: Adams Foyer*

8:00 a.m. – 9:00 a.m.

**What Is Pain? Conceptual Change in Action**

9:00 a.m. – 10:30 a.m.

**What Modulates Pain?**

Nociception Versus Pain  
Protection Versus Symptom  
The Representing Brain (Or, How Does It Happen?)  
Peripheral Sensitisation

10:30 a.m. – 10:50 a.m.

Break

*Location: Adams Foyer*

# Reduction of Chronic Abdominal and Pelvic Pain, Urological and GI Symptoms Using a Wearable Device Delivering Low Frequency Ultrasound

David Wiseman, PhD, MRPharmS and Teena Petree, PT, International Adhesions Society; Summit Physical Therapy, Dallas, TX

**Summary**  
PainShield®, a portable, wearable ultrasound device was found to reduce pelvic, urological pain and related symptoms in 19 patients presenting with long-standing and refractory symptoms.

**Objective**  
To assess the efficacy of PainShield for pelvic and related pain.

**Methods**  
Design: Open-label, prospective, experiential study  
Patients: 16 women and 3 men (age 46, range 33-62)  
Inclusion criteria: Age > 18 years  
Doctor or PT prescriber/order  
History of chronic pelvic urological or related pain or symptoms, refractory to other treatment  
Exclusion criteria: Malignancy, known sensitivity to ultrasound  
Time from first Dx: 15.3 years, range 1-33 years  
Diagnoses: Adhesions 63%  
Bowel obstruction 42%  
Endometriosis 26%  
IBS 32%  
Interstitial Cystitis 32%  
Other Chronic Pelvic Pain 63%

Scoring based on: Brief Pain Inventory, Short-Form McGill Questionnaire  
International Pelvic Pain Society's form  
Scores collected before and up to 51.4 (range 1-207) days after treatment started.

Comparison: Maximum scores for each type of pain from before and after treatment were ranked and compared (t test).

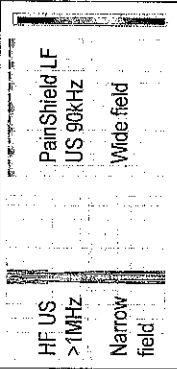
Treatment: 1-2 sessions/day each consisting of 12 alternating periods (30 minutes) of active and inactive ultrasound energy delivery.

**Acknowledgement**  
We thank Nanovibronix, Inc. (Nesher, Israel) for providing PainShield units at no cost.

**Citation**  
Wiseman DM & Petree T "Reduction of chronic abdominal and pelvic pain, urological and GI symptoms using a wearable device delivering low frequency ultrasound." Abstract 42, Poster 29, International Pelvic Pain Society Meeting, Chicago, October 16-20, 2012

**Therapeutic Ultrasound**

- Ultrasound widely known for effects in pain relief, muscle spasm and wound healing
- Low frequency, low intensity ultrasound shown to reduce pain & biofilm formation, increase wound healing via possible effects on nerves, blood vessels and nitric oxide formation



**PainShield Driver and Patch**

**PainShield**

- Thin 3cm transducer in self-adhering, portable and wearable patch
- Efficacy shown in trigeminal neuralgia and other pain conditions
- Conventional units limited by cost, size, portability and availability to offices
- Penetration of US energy of up to 4 cm below the surface and therapeutic action reaching up to 20 cm from the device

**Results**

| Symptom                          | Maximum pain or symptom score |          | N  | P     |
|----------------------------------|-------------------------------|----------|----|-------|
|                                  | Before Tx                     | After Tx |    |       |
| Bladder pain before urination    | 6.1                           | 4.3      | 12 | 0.021 |
| Pain on urination                | 6.0                           | 2.0      | 7  | 0.001 |
| Urinary urgency (% of time)      | 100%                          | 54%      | 6  | 0.060 |
| Urination frequency (day)        | 21                            | 14       | 11 |       |
| Difficulty urinating (% of time) | 100%                          | 60%      | 6  | 0.080 |
| Other CAPP                       | 8.3                           | 5.9      | 12 | 0.042 |
| Dyspareunia, during              | 7.8                           | 5.5      | 12 |       |
| Dyspareunia, after               | 6.6                           | 4.3      | 8  |       |
| Dyschezia                        | 7.7                           | 3.6      | 10 | 0.001 |
| Abdominal bloating (% of time)   | 83%                           | 53%      | 10 | 0.049 |
| Rectal Pain                      | 9.3                           | 6.0      | 4  |       |
| SI-Joint Pain                    | 8.5                           | 6.5      | 6  | 0.081 |
| Sitting tolerance time (mins)    | 36.3                          | 90.8     | 12 |       |
| Other musculoskeletal pain       | 7.4                           | 5.2      | 18 | 0.030 |

**Results**

- Onset of relief often within hours or days after starting treatment
- Patients rated their overall response as:
  - Negative 2/19
  - Mild 4/19
  - Moderate 3/19
  - Good 10/19
- Improvements in pain or related symptoms noted for all symptoms:

**Exceeding Significance (<0.05)** Approaching Significance (<0.10)

- Bladder pain before urination
- Pain on urination
- Dyschezia
- Abdominal bloating
- Other musculo/joint pain
- Other chronic pelvic or abdominal pain

**Numerical Reductions**

- Urination frequency
- Dyspareunia (during or after)
- Rectal pain
- Sitting tolerance

**Anecdotal reports of clinically significant:**

- reductions in analgesic and medication usage and cost
- improvements in sleep due to less pain
- Effects seen for maximum score mirrored for minimum & average scores, and longer term follow-up
- Delayed return of symptoms after discontinuation of treatment in several patients with return of effect after resumption

**Adverse events**

The two patients responding negatively reported a rapid onset (< 1 day) of pain and/or swelling which subsided from 1 to several days later. One patient responding well experienced some abdominal discomfort after using the device. Two of these patients reported similar reactions to conventional office-based ultrasound.

**Conclusion**

Further evaluation of PainShield for CPP is warranted.

**Disclosure**

At the time of the study, neither author had a financial interest in the evaluated product. Subsequently DW has formed a company (KeVMed) to distribute PainShield for pelvic pain and related conditions.

For full prescribing information please contact:  
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