

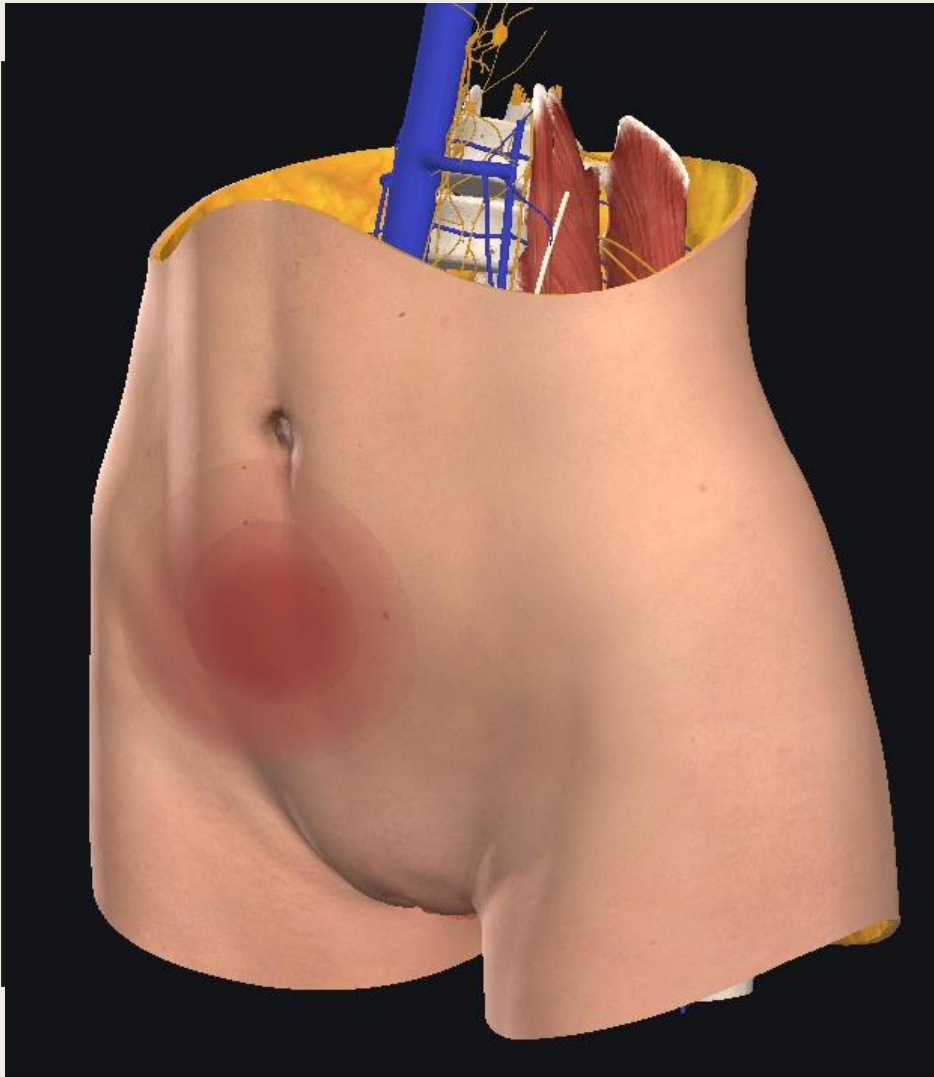


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OB/GYN 2000 – 2018
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2002 – 2006 / 2010 - 2014

Conflicts and Disclosures

- I Have No Conflicts of Interest
- My views expressed in this presentation are my own and do not reflect the official position or policy of the University of Washington Medical Center
- This presentation is for academic and professional purposes only



CHRONIC PELVIC PAIN

Gyn etiologies of **Chronic Pelvic Pain**

chronic pelvic pain

Objectives

- ▶ Definition
- ▶ Scope of Problem
 - ▶ Individual and Societal Morbidity
- ▶ Identify Causes
 - ▶ General
 - ▶ GYN specific
- ▶ Evaluation of Patient
- ▶ Diagnostic Work Up
 - ▶ Labs
 - ▶ Imaging
- ▶ Management
 - ▶ Medical
 - ▶ Surgical
- ▶ Conclusion

- Risk developing a chronic pain syndrome
- Appreciation of pain varies in extremes between patients
- Problems in one organ system influence others especially in the female pelvis
- **Repetitive surgery** can exacerbate the problem by stimulating nerve pathways resulting in **a chronic pain syndrome caused the the surgery** and not by an underlying disease state

Chronic pelvic pain

Central Sensitization

Chronic Pelvic Pain

Definition

American College of OB/GYN

- Noncyclic pain that lasts for 6 months or longer
- Localized to the pelvis, the anterior abdominal wall at or below the umbilicus, or the buttocks
- Sufficient in severity to cause functional disability or require medical care

Royal College of OB/GYN

- Intermittent or constant pain of at least 6 months duration
- Localized in the lower abdomen or pelvis
- Not occurring exclusively with menstruation or intercourse
- Not associated with pregnancy

Chronic Pelvic Pain

Prevalence

- ASTHMA 8%
- BACK PAIN 23%
- Migraine 18%
- Chronic Pelvic Pain 14 - 24%

Chronic Pelvic Pain

Economic Burden

- \$881,500,000 million DOLLARS a year in direct healthcare costs
- \$2,800,000,000 billion Dollars in overall costs

- 10% of gyn visits
- 15% of primary care visits
- 15 – 40% of scopes
- 15% of hysterectomies

Chronic pelvic pain

Personal Impact

- Disrupts work and family life
- Impedes physical activity
- Marginalizes sexual relations
- Interrupts sleep
- Deterioration of both physical and mental health

CHRONIC PELVIC PAIN

CAUSES

■ Gynecologic

- **Endometriosis**
- **Leiomyomata**
- **Adenomyosis**
- Pelvic Masses
- PID
- **Adhesions**
- Pelvic Congestion
- Levator Muscle Spasm
- Residua from Birth Trauma

■ Urologic

- **Interstitial Cystitis/Painful Bladder Syndrome**

■ Gastroenterologic

- **IBS**

■ Musculoskeletal

- **Myofascial Pain**
- **Fibromyalgia**

■ Neurologic

- **Nerve entrapment**
- **Central Sensitization**

Chronic Pelvic Pain

Approach

Gather and review all available data

Recognize that more than one visit may be required

Utilize standard questionnaires

Assess for mental health concerns

Perform a physical exam

Chronic pelvic pain

Initial Evaluation

Evaluate for a history suggestive of:

Endometriosis

Adenomyosis

Fibroids

Adhesions

IBS

Painful Bladder Syndrome

Asses characteristics of the pain:

Associated

Provocative

Quality

Radiation

Setting

Temporal

Psychosocial:

Depression / Anxiety

Substance use or abuse

Abuse – physical / sexual / emotional

Chronic pelvic

Pain Characteristics

Associated

A

Provocative/Palliative

P

Quality

Q

Radiation

R

Setting

S

Temporal Aspects

T

Chronic pelvic pain

Associated Findings

- Sexual Symptoms
 - *Dyspareunia*
- Urinary Symptoms
 - *Interstitial Cystitis*
- Bowel Symptoms
 - *IBS*
- Myofascial Symptoms
- Autonomic Symptoms

Chronic Pelvic Pain

Provocative / Palliative

what makes it worse or better?

Pain that is altered with specific “activities” or position changes may suggest a musculoskeletal or pelvic girdle issue or potentially **ENDO / Adhesions / Adeno**

Pain with urination or defecation can be **ENDO** / IBS / interstitial cystitis

IBS and painful bladder syndrome are typically associated with some degree of impaired visceral function

Pain that worsens with eating or is relieved with BM suggests GI

CHRONIC PELVIC PAIN

Quality

Muskuloskeletal – **aching**

Neuropathic – **burning**

Uterine - **cramping**

CHRONIC PELVIC PAIN

Radiation

- Where is the focus of the pain?
- Pain that starts in the back and radiates to the front may be pelvic girdle
- Nephrolithiasis radiates to the flanks and around

Chronic pelvic pain

Setting

■ Dysmenorrhea

- *Primary – pain with menses w/o identifiable pathology*
- *Secondary – pain with menses due to underlying pathology*
 - Endometriosis
 - Adenomyosis
 - Fibroids
 - Outlet Obstruction

■ Dyspareunia

- *Insertional vs Deep*

Chronic pelvic pain

Temporal

- Prior Procedure or Injury
 - *Adhesions*
 - *Musculoskeletal*
 - *OB trauma*
- Prior Chronic Pain Episodes
 - *Centralization*
 - *Fibromyalgia*
- Prior Visceral Dysfunction
 - *IBS*
 - *Painful Bladder syndrome*
- Cyclical Exacerbation
 - *Dysmenorrhea*
 - *Endo*
 - *Adenomyosis*

Chronic pelvic pain

Psychosocial Assessment

- Sleep Disorders
- Abuse
 - 47% h/o of physical or sexual abuse*
- Psychiatric Disorders
 - 50% have depression*
- Substance Dependency
- Somatic Sensitivity

GYN PATHOLOGY

Chronic pelvic pain

Adhesions

- 27% with Pfannenstiel
- 55% with prior midline below umbi
- 67% with prior midline above umbi

- Cause CPP in up to 50% of cases
 - *SBO intermittent*
 - *dyspareunia*
 - *infertility*

GYN PATHOLOGY

Chronic Pelvic Pain

Pelvic Inflammatory Disease

- Infection of the reproductive organs
- Lifetime prevalence up to 10%
- Gonorrhea or Chlamydia gain access through the cervix reaching the uterus / ovaries and fallopian tubes
- Causes abscess formation and adhesions
- Often presents acutely as vaginal discharge / fever / pain BUT many cases do not cause symptoms
- Can result in chronic pain and infertility

GYN PATHOLOGY

Chronic Pelvic Pain

Dysmenorrhea

- Primary
 - *Pain with menses without underlying pathology*
- Secondary
 - *Pain with menses due to underlying pathology*
 - Endometriosis
 - Adenomyosis
 - Outlet obstruction
 - Cervical Stenosis
 - Fibroids
 - Polyps

Dysmenorrhea

Treatment

- Primary dysmenorrhea
 - *NSAIDS initiated a few days before cycle starts*
 - *OCPs*
 - *IUD (levonorgestrel)*
 - *Norethindrone*
 - *Depot Provera*

GYN PATHOLOGY

Chronic pelvic pain

Adenomyosis

- The benign invasion of the endometrium into the myometrium, producing a diffusely enlarged uterus which microscopically exhibits ectopic non-neo-plastic, endometrial glands and stroma surrounded by hypertrophic and hyperplastic myometrium.



Adenomyosis

Symptoms

- Pelvic pain
- Menorrhagia
- Dysmenorrhea
- Dyspareunia
- Pressure
- Mass effect

Adenomyosis

Treatment

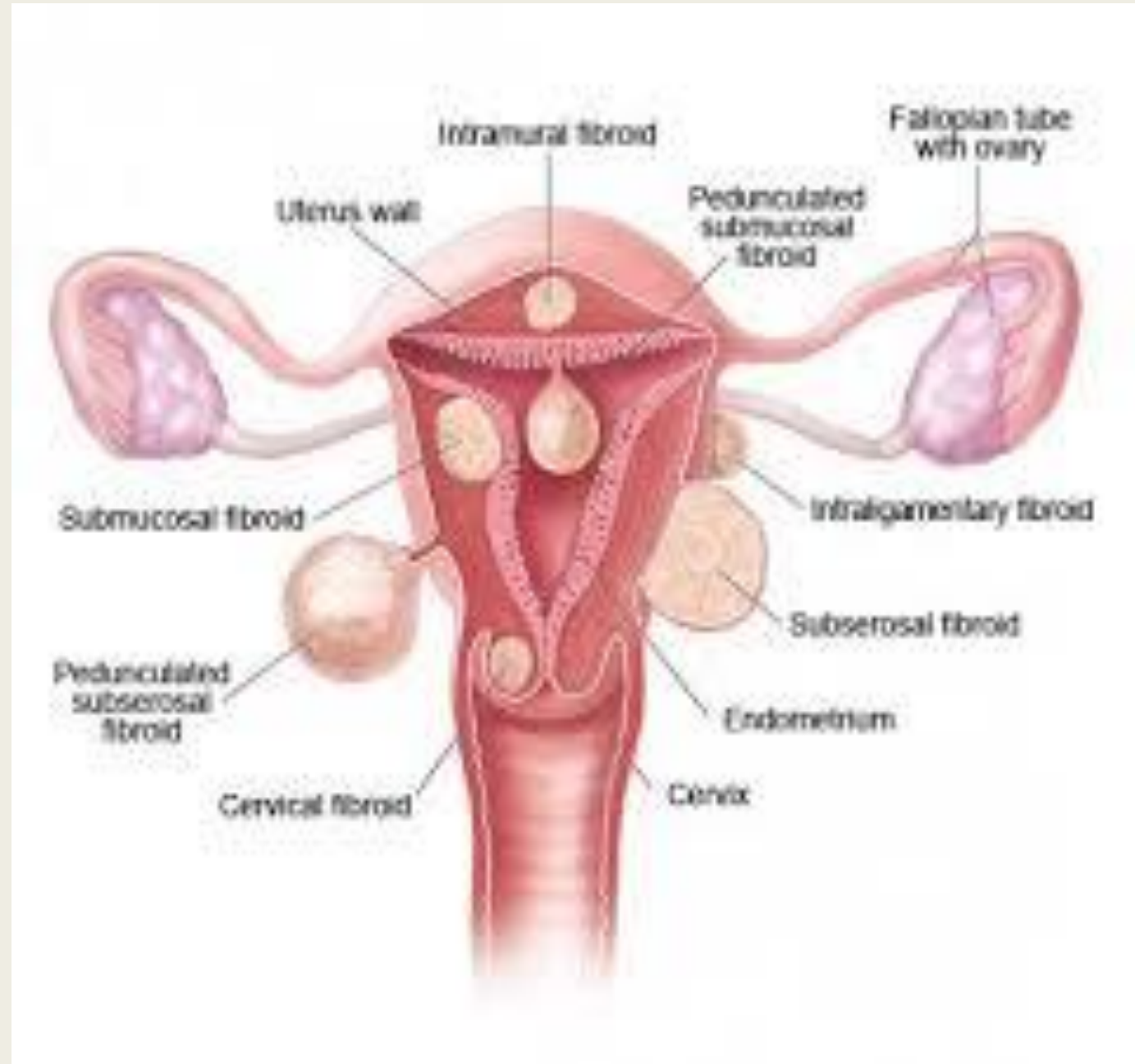
- Medical management
 - *IUD – first line*
 - *OCPs*
- UAE – mixed results
- Endometrial Ablation 50/50
- Surgery – hysterectomy definitive

GYN PATHOLGY

Fibroids

Symptoms

- Menorrhagia
- Dysmenorrhea
- Dyspareunia
- Frequency/Urgency
- Constipation
- Mass effect
- Pain 15%
- Pregnancy wastage



Fibroids

Risk Factors

■ Increased Risk

- *African American Women*
- *Early Menarche*
- *Beer*
- *Genetics*
- *OCPs (initiated at age 13 - 16)*

■ Decreased Risk

- *Pregnancy (beyond 20 weeks)*
- *Smoking (inhibition of aromatase)*

■ Unknown

- *Obesity*
- *Diet*

Fibroids

Treatment

- Medical Management (success depends on size and location)
 - OCPs
 - IUD – levonorgestrel +/-
 - Depot Lupron (temporizing)
- Invasive Procedures
 - Hysteroscopy
 - UAE (EMBO) – global TX / 6 months to results / 5 year 25% re-intervention rate / not for those pursuing pregnancy
 - HIFU – still investigational? / not covered by insurance / restricted candidates
 - Myomectomy – both open and minimally invasive approaches
 - Hysterectomy - definitive

FIBROIDS

MORCELLATION

sarcoma CONTROVERSY

- Incidence in general population of 3-7/100,000
- Incidence in symptomatic patients seeking surgery 1/350 ? (FDA)
- Minimally Invasive Surgery has overall less morbidity for patients
- Converting all cases to open procedures increases morbidity including death in the general surgical population

WHAT'S THE RISK BY AGE?

Hidden uterine cancers found after morcellation.

Approximate cases, out of 10,000 U.S. women.

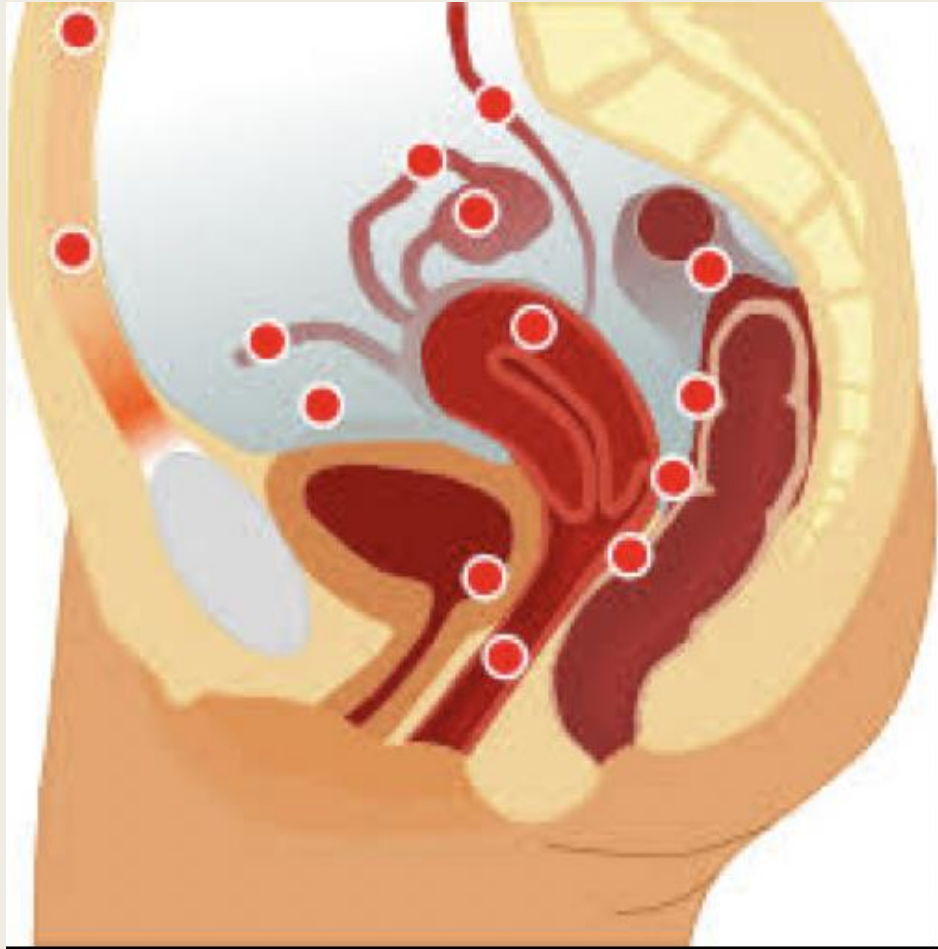


Source: Journal of the American Medical Association, study published July 2014.

GYN PATHOLOGY

Chronic pelvic pain

Endometriosis



- The presence of endometrial-like glands and stroma outside the uterus ie ectopic location

Endometriosis

Pathophysiology

- **Retrograde Menstruation**
(dysfunction of the peritoneal immune system)
- **Coelomic Metaplasia**
(pluripotential mesothelial cells differentiate into endometrial cells)
- **Mullerianosis** (misplaced endometrial tissue at time of fetal organogenesis)

Endometriosis

Incidence

- 6 – 10% of reproductive age women
- Average age at DX is 28
- Present in 34% of subfertile women
- **Present in 70% of women with chronic pelvic pain**

Endometriosis

Delay in DX

- ▶ Interval between presentation and DX is 7 – 8 years
- ▶ average of 7 visits to primary care prior to referral
- ▶ overlap with other pain associated syndromes

Adnenomyosis

Primary dysmenorrhea

IBS

Interstitial Cystitis / Painful Bladder

Psychosocial issues

Pelvic floor DO

Endometriosis

Predisposing Factors

- Early Menarche
- Short Interval Cycle Length
- Heavy Menses
- Nulliparity
- Familial Predisposition (genetic component)
10 fold increased incidence
- *Oral Contraceptive Use is Protective*

Endometriosis

Presentation

- Pelvic pain
- **Dysmenorrhea** – becomes severe and progressive
- Adnexal Masses
- Infertility
- **Dyspareunia** – especially with deep penetration
- dyseschezia – pain with defecation

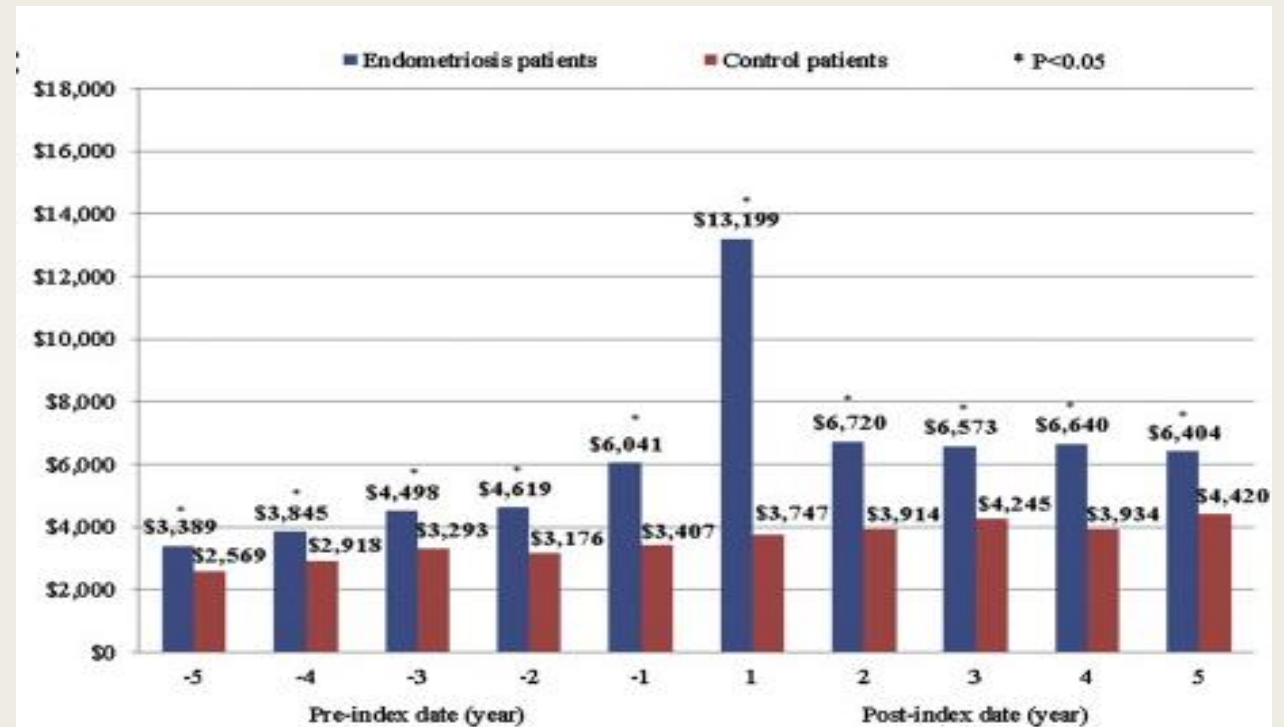
Endometriosis Morbidity

■ Functional Impairment

- *Disrupts work and family life*
- *Impedes physical activity*
- *Marginalizes sexual relations*
- *Interrupts sleep*
- *Deterioration of both physical and mental health*

■ It is estimated that the yearly societal burden approaches \$78 billion due to costs of medical management / surgical management / loss of productivity

■ CDC estimate of women impacted - **13.4 million**



(Simmoens; Burden of Endometriosis, Hum Reprod, 27 (2012),pp1292-99)

Endometriosis

Medical Management

ACOG and ASRM encouraged

Estrogen / Progesterone Combinations

pills / patches / nuvairing

Progesterone

Depo shot / Nexplanon / pills

IUD

Mirena / Kylena / Skyla

GnRH agonists

Depot Lupron / Orilissa

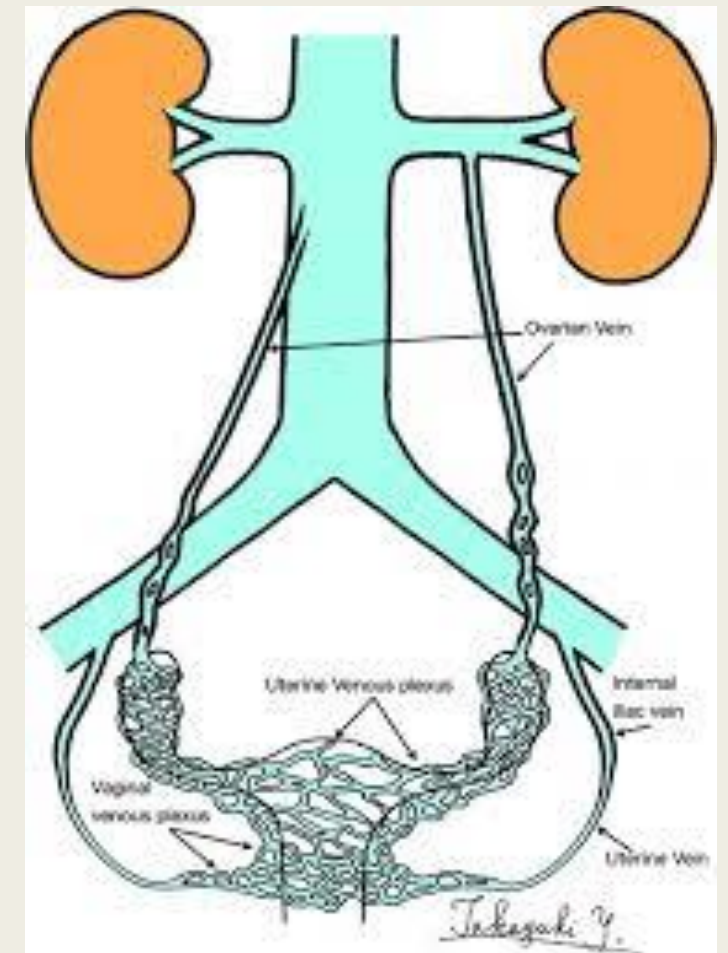
A		B	C	D	E	F	G	H
Estimates of Funding for Various Research, Condition, and Disease Categories (RCDC)								
Research/Disease Areas (Dollars in millions and rounded)		FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Estimated (Enacted)	FY 2019 Estimated	2015 US Mortality 19/
A	B	C	D	E	F	G	H	
81	Diabetes 4/	\$1,011	\$1,010	\$1,084	\$1,108	\$1,172	\$987	252,806
82	Dietary Supplements	+	+	\$294	\$296	\$313	\$289	-
83	Diethylstilbestrol (DES)	\$1	\$1	\$1	\$4	\$4	\$4	-
84	Digestive Diseases	\$1,607	\$1,684	\$1,745	\$1,881	\$2,009	\$1,866	-
85	Digestive Diseases - (Gallbladder)	\$9	\$8	\$11	\$12	\$12	\$12	6,073
86	Digestive Diseases - (Peptic Ulcer)	\$15	\$16	\$9	\$8	\$8	\$8	6,184
87	Down Syndrome	\$18	\$24	\$27	\$35	\$58	\$34	2,144
88	Drug Abuse (NIDA Only) 5/	\$1,018	\$1,016	\$1,049	\$1,071	\$1,335	\$1,137	-
89	Duchenne/ Becker Muscular Dystrophy	\$32	\$30	\$33	\$30	\$32	\$30	-
90	Dystonia	\$12	\$14	\$16	\$15	\$15	\$14	219
91	Eating Disorders 6/	\$30	\$31	\$28	\$32	\$34	\$32	188
92	Eczema / Atopic Dermatitis	+	\$27	\$29	\$32	\$34	\$31	-
93	Emergency Care	+	\$122	\$129	\$139	\$147	\$137	-
94	Emerging Infectious Diseases	\$1,930	\$2,053	\$2,336	\$2,591	\$2,825	\$2,608	-
95	Emphysema	\$27	\$28	\$29	\$27	\$28	\$26	15,961
96	Endocannabinoid System Research	+	+	\$51	\$63	\$67	\$64	-
97	Endocrine Disruptors	+	+	\$140	\$177	\$188	\$164	-
98	Endometriosis	\$7	\$10	\$10	\$6	\$7	\$6	24
99	Epilepsy	\$154	\$138	\$153	\$154	\$163	\$152	5,242
100	Estrogen	\$203	\$194	\$205	\$220	\$232	\$214	-
101	Eye Disease And Disorders Of Vision	\$824	\$779	\$847	\$882	\$933	\$859	-
102	Facioscapulohumeral Muscular Dystrophy	\$7	\$8	\$9	\$11	\$11	\$11	-
103	Fetal Alcohol Syndrome	\$34	\$32	\$29	\$28	\$30	\$28	22
104	Fibroid Tumors (Uterine)	\$9	\$10	\$12	\$11	\$12	\$11	65
105	Fibromyalgia	\$10	\$8	\$11	\$14	\$15	\$14	467
106	Food Allergies	\$35	\$39	\$76	\$79	\$83	\$76	-
107	Foodborne Illness 7/	\$232	\$105	\$116	\$105	\$111	\$101	-
108	Fragile X Syndrome	\$36	\$38	\$44	\$46	\$49	\$46	38
109	Frontotemporal Dementia (FTD)	\$37	\$36	\$65	\$91	\$96	\$89	1,555
110	Gene Therapy	\$253	\$238	\$265	\$266	\$284	\$261	-
111	Gene Therapy Clinical Trials	\$26	\$23	\$32	\$34	\$36	\$33	-
112	Genetic Testing	\$231	\$161	\$165	\$148	\$157	\$146	-
113	Genetics	\$7,324	\$7,480	\$8,070	\$8,501	\$9,080	\$8,428	-
114	Global Warming Climate Change	\$4	\$4	\$3	\$4	\$4	\$4	-
115	Headaches	\$24	\$24	\$24	\$30	\$32	\$29	-
116	Health Disparities 8/	\$2,734	\$2,825	\$3,093	\$3,168	\$3,353	\$3,117	-
117	Health Effects of Household Energy Combustion	+	\$14	\$17	\$17	\$18	\$16	-

GYN PATHOLOGY?

Chronic pelvic pain

Pelvic Congestion Syndrome

- Controversial as overlaps other pathology
 - 30% of women have incompetent or absent pelvic veins
 - Laparoscopy is negative in 90%
 - Exams are performed in recumbent position
- When other etiologies of pelvic pain have been ruled out
- MRI DX / DX venogram
- Dilated pelvic veins resulting in CPP
 - Discomfort with prolonged standing
 - Dyspareunia
 - Just before onset of menses



UROLOGIC PATHOLOGY

chronic pelvic pain

Painful Bladder Syndrome/Interstitial Cystitis

- Dysuria / frequency / urgency / CPP / dyspareunia w/flares
- 1.2 million women affected
- Etiology unknown – damaged bladder urothelium / mast cell degranulation
- DX of exclusion due to overlapping disease processes and syndromes
- Cystoscopy for DX
- Treatments
 - *Oral – PPS / hydroxyzine / amitriptyline / cyclosporine / cimetidine*
 - *Intravesical – DMSO / BTA*
 - *Ablation of lesions*

GI PATHOLOGY

Chronic pelvic pain

Irritable Bowel Syndrome

- Abdominal **pain** or discomfort associated with altered bowel habits over a period of 3 months
 - *With 2 or more of change in frequency, form, emptying / mucous / bloating*
- Due to abnormal motility / irregular absorption / decreased serotonin activity
- Up to 20% of population affected
- 50% occurs before age 35
- 50% more common in women
- Cost 20 billion annually
- Use 50% more healthcare resources

GYN ETIOLOGIES IN

Chronic pelvic pain

Summary and Recommendations

- Pelvic pain for 6 months (non cyclic by ACOG definition BUT important)
- 6 - 25% of reproductive age women
- Is an end symptom with multiple overlapping possible causes / contributors
- History - GI / urinary / **GYN** / musculoskeletal / sexual / psych
- Physical exam is essential
- LAB testing is rarely helpful
- Imaging with liberal use of **Ultrasound** (MRI in consultation with GYN)
- Laparoscopy may be considered for Dx and TX
- Hysterectomy may be used ultimately with success in many with **GYN origin**