DISCLOSURES

• I have no conflicts to disclose
  • No financial relationships
  • No commercial interests
  • No sponsorship
LEARNING OBJECTIVES

At the conclusion of this presentation, learners will be able to:

• Identify key signs and symptoms of common gynecologic medical conditions to help establish a differential diagnosis
• Utilize evidence-based laboratory and imaging modalities to support a working diagnosis
• Describe evidence-based treatments of commonly encountered gynecologic conditions
### NCCPA Blueprint

**Uterus**
- Dysfunctional uterine bleeding
- Endometrial cancer
- Endometriosis
- Leiomyoma
- Prolapse

**Ovary**
- Cysts
- Neoplasms

**Cervix**
- Cancer
- Cervicitis
- Dysplasia
- Incompetent

**Vagina/Vulva**
- Cystocele
- Neoplasm
- Prolapse
- Rectocele
- Vaginitis

**Menstrual Disorders**
- Amenorrhea
- Dysmenorrhea
- Premenstrual syndrome

**Menopause**

**Breast**
- Abscess
- Cancer
- Fibroadenoma
- Fibrocystic disease
- Gynecomastia
- Galactorrhea
- Mastitis

**Pelvic Inflammatory Disease**

**Contraceptive Methods**

---

*Gynecomastia not discussed*
PREMENSTRUAL SYNDROME
PREMENSTRUAL DYSPHORIC DISORDER

• Affective and physical symptoms
  • Depressed mood, irritability, distractibility
  • Bloating, breast tenderness, fatigue

• ACOG: “economic or social dysfunction” that occurs during the five days before the onset of menses and is present in at least three consecutive menstrual cycles
PMDD DSM-V CRITERIA

One or more of the following sx$s must be present:

- Mood swings, sudden sadness, increased sensitivity to rejection
- Anger, irritability
- Sense of hopelessness, depressed mood, self-critical thoughts
- Tension, anxiety, feeling on edge

One or more of the following sx$s must be present to reach a total of five symptoms overall:

- Difficulty concentrating
- Change in appetite, food cravings, overeating
- Diminished interest in usual activities
- Easy fatigability, decreased energy
- Feeling overwhelmed, or out of control
- Breast tenderness, bloating, weight gain, or joint/muscles aches
- Sleeping too much or not sleeping enough
DISORDERS OF THE CERVIX

• HPV
• Cervicitis
• Cervical dysplasia
• Cervical cancer
• HPV 6, 11 most commonly associated with genital warts

• Oncogenic HPV-HR types:
  • 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, and 59
  • **16 and 18** most common in the US
• **Quadrivalent HPV Vaccine** (GARDASIL®): Types 6, 11, 16, and 18; 3 doses (initial, 2 months, 6 months*)
  • indicated in **women** 9 - 26 y/o for the prevention of cervical, vulvar, and vaginal cancers and for **males and females** 9 - 26 y/o for the prevention of anal cancer, precancerous or dysplastic lesions, and genital warts

• **Nine-valent Vaccine** (GARDASIL 9®): FDA approved for prevention of cervical, vulvar, vaginal, anal cancers, & prevention of genital warts.
  • Indicated for use in females 9–26 y/o and males 9–15 y/o.
  • Gardasil 9® covers five more types of HPV than the currently approved quadrivalen vaccine: 6, 11, 16, 18, 31, 33, 45, 52, 58.
### Terminology and histology of cervical intraepithelial neoplasia

<table>
<thead>
<tr>
<th>LAST System (1)</th>
<th>Cytology</th>
<th>LSIL</th>
<th>HSIL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Histology</td>
<td>LSIL</td>
<td>p16 staining should be performed&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Bethesda Classification System (2)</td>
<td>Cytology</td>
<td>LSIL</td>
<td>CIN 2</td>
</tr>
<tr>
<td></td>
<td>Histology</td>
<td>CIN 1</td>
<td>CIN 2</td>
</tr>
<tr>
<td>Previous terminology</td>
<td>Mild dysplasia</td>
<td>Moderate dysplasia</td>
<td>Severe dysplasia</td>
</tr>
<tr>
<td>Histologic images</td>
<td><img src="image1.png" alt="Histologic images" /></td>
<td><img src="image2.png" alt="Histologic images" /></td>
<td><img src="image3.png" alt="Histologic images" /></td>
</tr>
</tbody>
</table>

Terminology regarding cytologic and histologic precancerous changes of the uterine cervix. The corresponding terminology from the previous classification systems is shown. Images of the histologic correlates for each category are also shown.

- **LSIL**: low-grade squamous intraepithelial neoplasia
- **HSIL**: high-grade squamous intraepithelial neoplasia
- **CIN**: cervical intraepithelial neoplasia

<sup>a</sup> CIN 2 that is p16-positive is classified as HSIL. CIN 2 that is p16-negative is classified as LSIL.

References:
ACOG GUIDELINES

• For **average-risk women:**
  • Starting at age 21.
  • Aged 21 to 29: screening with cervical cytology alone Q 3 years.
  • Aged 30 to 65: preferred is co-testing with cytology & HPV testing Q 5 years (cytology alone Q 3 years is acceptable).

• For women >65 y/o, screening should **not** be performed if recent neg screening results and no hx of (CIN) 2 +.

• For women with total hysterectomy who’ve never had CIN 2 or higher, screening should **not** be performed.

Management of Women with Low-grade Squamous Intraepithelial Lesions (LSIL)

**ASCCP GUIDELINES**

Management of Women with Low-grade Squamous Intraepithelial Lesions (LSIL)*

- **LSIL with negative HPV test**
  - Repeat Cotesting @ 1 year
  - Cytology Negative and HPV Negative
  - Repeat Cotesting @ 3 years

- **LSIL with no HPV test**
  - Acceptable
  - Colposcopy
    - Non-pregnant and no lesion identified
    - Inadequate colposcopic examination
    - Adequate colposcopy and lesion identified
    - Endocervical sampling “preferred”
    - Endocervical sampling “acceptable”

- **LSIL with positive HPV test**
  - Endocervical sampling “preferred”
  - Endocervical sampling “acceptable”

* Management options may vary if the woman is ages 21-24 years (see text)

Manage per ASCCP Guideline

No CIN2,3

CIN2,3

Manage per ASCCP Guideline

Reprinted from: The Journal of Lower Genital Tract Disease Volume 17, Number 5, with the permission of ASCCP © American Society for Colposcopy and Cervical Pathology 2013. No copies of the algorithms may be made without the prior consent of ASCCP.
Management of Women with High-grade Squamous Intraepithelial Lesions (HSIL)*

Immediate Loop Electrosurgical Excision + Or Colposcopy (with endocervical assessment)

No CIN2,3 CIN2,3

Manage per ASCCP Guideline

* Management options may vary if the woman is pregnant or ages 21-24
* Not if patient is pregnant or ages 21-24
• **Infectious:**
  • Chlamydia, Gonorrhea, Trichomonas, HPV, HSV

• **Noninfectious:**
  • Local trauma - cervical irritation (tampons, cervical cap, IUD string, pessary, or diaphragm)
  • Radiation
  • Chemical irritation - vaginal douches, latex exposure, or contraceptive creams
  • Systemic inflammation - Behçet syndrome
  • Malignancy
CERVICITIS

- **Presentation**: vaginal discharge, mucopurulent cervical discharge
- **Tx Gonorhea**: ceftriaxone 250 mg single IM dose, plus either azithromycin 1 g orally in a single dose or doxy 100 mg BID x 7 days.
- **Tx Chlamydia**: 1st line: doxycycline 100 mg BID x 7 days or azithromycin 1 gram orally x one
  - Ofloxacin 300 mg BID x 7 days or levofloxacin 500 mg QD x 7 days
  - Erythromycin QID x 7-14 d
- Test of cure not necessary unless pt is pregnant or emycin used
CERVICITIS

• **Tx *Trichomonas***: tinidazole or metronidazole four 500 mg tablets x one
  - Can do bid x 7 days
  - Avoid vaginal gel (cure rate <50%)
  - IF breastfeeding: tinidazole (has a longer half-life than metro), CDC suggests interrupting breastfeeding for 3 days after the last dose

• **Tx HSV**: Acyclovir 400 mg TID x 7–10 days, Acyclovir 200 mg 5 x/d x 7–10 days, Famciclovir 250 mg TID x 7–10 days, OR Valacyclovir 1 g BID x 7–10 days

image from: http://37.media.tumblr.com/tumblr_m1kq6npjcx1rq3lp6o1_250.jpg
OVARIAN MASSES

- **Functional cysts**
  - Follicular, lutein cysts; polycystic

- **Inflammatory lesions**
  - Oophoritis

- **Metaplastic lesions**
  - Endometriomas

- **Neoplastic lesions**
  - Premenarche: 10% malignancy
  - Menstruating: 15% malignancy
  - Postmenopausal: 50% malignancy
OVARIAN CYSTS

• **Functional:**
  - Diameter must be ≥ 3 cm
    - The size of an ovarian follicle is between 15 - 25 mm
  - Common in menstruating women
  - >5 cm = consider surgical resection if symptomatic
  - Risk of torsion or rupture
OVARIAN CYSTS

• Endometriomas
  • Ectopic endometrial tissue within the ovary bleeds
  • Results in a hematoma surrounded by duplicated ovarian parenchyma

OVARIAN CANCER

Origins of ovarian tumors

Sex cord-stroma
- Granulosa cell
- Thecoma
- Fibroma
- Sertoli cell
- Sertoli-Leydig
- Steroid

Germ cells
- Dysgerminoma
- Yolk sac
- Embryonal carcinoma
- Choriocarcinoma
- Teratoma

Surface epithelium-stroma
- Serous
- Mucinous
- Endometrioid
- Clear cell
- Transitional cell

Some epithelial ovarian carcinomas may originate in the fallopian tube epithelium.
OVARIAN CA

• 2nd most common gyn malignancy in women
• 95% of ovarian CA is epithelial
• BRCA 1, 2
  • Risk higher with BRCA 1
  • ~15% Ovarian CA assoc with BRCA
• Presentation depends upon severity of disease
• Urinary changes, early satiety, pelvic pain, bloating
• Adnexal mass
• Ascites
# Risk factors for ovarian cancer

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Relative Risk</th>
<th>Lifetime probability, percent</th>
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</thead>
<tbody>
<tr>
<td>General population</td>
<td>1.0</td>
<td>1.4[1]</td>
</tr>
<tr>
<td>BRCA1 gene mutation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BRCA2 gene mutation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lynch syndrome (hereditary nonpolyposis colon cancer)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family history of ovarian cancer (with negative testing for a familial ovarian cancer syndrome)</td>
<td></td>
<td></td>
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<tr>
<td>Infertility</td>
<td>2.6[5]</td>
<td></td>
</tr>
<tr>
<td>Polycystic ovarian syndrome</td>
<td>2.5[6]</td>
<td></td>
</tr>
<tr>
<td>Endometriosis (increase in risk of clear cell, endometrioid, or low grade serous carcinomas)</td>
<td>2.04 to 3.05[7]</td>
<td></td>
</tr>
<tr>
<td>Cigarette smoking (increase in risk of mucinous carcinoma)</td>
<td>2.1[8]</td>
<td></td>
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<tr>
<td>Intrauterine device</td>
<td>1.76[9]</td>
<td></td>
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<tr>
<td>Past use of oral contraceptives</td>
<td>0.73[10]</td>
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<tr>
<td>Past breast feeding (for &gt;12 months)</td>
<td>0.72[11]</td>
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<tr>
<td>Tubal ligation</td>
<td>0.65[12]</td>
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<tr>
<td>Previous pregnancy</td>
<td>0.6</td>
<td></td>
</tr>
</tbody>
</table>

References:
EVALUATION OF ADNEXAL MASS

• Determine urgency
• Anatomic location (fallopian tube vs ovary)
• Pre- or post-menopausal status
EVALUATION OF ADNEXAL MASS

• **History**: Family History, Gravida-Para status, Infertility, Associated Sxs

• **Imaging**: Ultrasound 1st, MRI secondary

• **Labs**
  • CA 125 (normal is <35 UmL)
  • AFP (germ cell tumors)
  • B HCG (choriocarcinoma)
  • CEA (mostly breast/colorectal)
  • CA 19-9 (pancreatic)
  • LDH (germ cell tumors)
PCOS

- Incidence about 12% of the population world-wide
- Oligomenorrhea (or amenorrhea)
- Hyperandrogenism
- Multiple follicles on ultrasound
- Adiposity
- Insulin resistance
- Infertility
WORK-UP OF PCOS

• Check HCG!!
• Check total and free testosterone
• Check SHBG (will be low)
• DHEA-S (>7000 ng/ml = suspect tumor)
• Metabolic testing (lipids, glc, CRP)
• Transvaginal ultrasound
PCOS TX

• Tx hyperandrogenic symptoms (hirsutism, acne, scalp hair loss)

• Management of underlying metabolic abnormalities/ reduction of risk factors for T2DM & CVD

• Prevention of endometrial hyperplasia and carcinoma

• Contraception

• Ovulation induction
DISORDERS OF THE BREAST

• Abscess
• Fibroadenoma
• Intraductal papilloma
• Galactorrhea
• Mastitis
• Cancer
BREAST ABSCESS

• **Presentation:**
  - similar to mastitis
  - localized, painful inflammation of the breast
  - fever and malaise
  - fluctuant, tender, palpable mass
• **Dx** with breast utz (to differentiate mastitis from abscess)
• **Differential dx** must include inflammatory breast CA
  - Suspect if tx fails
ABSCESS

- **S aureus** most common organism
- Tx with drainage and abx
  - **Dicloxacillin** 100mg QID or **Cephalexin** 500mg qid x 10d
  - **Clindamycin** 300mg qid (if beta lactam sensitive)
  - If suspicious for MRSA: TMP/SMX DS* or Clinda*
  - *if subareolar with nipple retraction: consider anaerobic coverage with metronidazole 500mg bid as well
  - Encourage breastfeeding pts to continue, or pump
FIBROADENOMA

• Fibrous and glandular tissue
• Most common benign breast condition
• Usually solitary mobile mass
• Common during reproductive years
• Mammo/utz
• Refer to breast or general surgeon
FIBROCYSTIC BREASTS

• Term has fallen out of favor
• Seen in menstruating women
• Dense, knotty, lumpy breasts, often with ↑ tenderness premenstrually
• Evaluate for dominant mass, changes
INTRADUCTAL PAPILLOMA

• Common during perimenopause
• “fertile ground” for neoplastic lesions
• Rarely palpable
• **Presentation**: serosanguineous or sanguineous nipple discharge
• Perform cytology, order mammogram and/or ultrasound (ductogram)
• Excision
The ultrasound of left breast shows a solitary dilated duct (A, arrow) with a filling defect consisting of soft tissue echoes within the duct (B, overlaid in green). These findings are consistent with a benign papilloma.

Courtesy of Priscilla J Slanetz, MD, MPH, FACR.
GALACTORRHEA

- Milky discharge from the breast (unilateral or bilateral)
- Rule out pregnancy!!
- Collect fluid if sanguineous
- Assess for infection, galactocele

**Medication list**
- Antipsychotics (1st and 2nd gen), TCAs, metoclopramide, verapamil, methyldopa, opioids

**Lab evaluation:**
- HCG, TSH, PRL
- Tx depends upon etiology
MASTITIS

• Non-infectious mastitis
  • Ductal ectasia
  • s/p rad tx
• Infectious mastitis
  • Lactational
  • Cellulitis
LACTATIONAL MASTITIS

- Breastfeeding woman
- Fever, chills, erythema, induration, pain
- *S. aureus* (Strep)
- **Dicloxacillin** is tx of choice; can use **clindamycin**
- Assess breastfeeding technique, infant for shortened frenulum/other maxillofacial defects
- Assess for secondary fungal infection
- Can still breastfeed (? HIV+)
BREAST CANCER

• **BRCA 1, 2** about 70% risk of breast cancer by 65 y/o
• About 10% of breast cancers are BRCA 1,2
• Breast cancer most common cancer among American women
BREAST CANCER

https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6145a5.htm
BREAST CANCER

• DCIS
• Infiltrating ductal (80%)
• Infiltrating lobular
• Inflammatory
BREAST CANCER

• Infiltrating ductal carcinoma the most common malignancy
• Inflammatory carcinoma the most aggressive, carries the worst prognosis.
• Newly dxd breast cancers
  • estrogen (ER), progesterone (PR) receptor expression, overexpression of human epidermal growth factor 2 (HER2) receptors.
  • Hormone receptor (ER and/or PR) positive cancers comprises the majority of cases (about 80%)*.
  • HER2 overexpressed in 23%
    • 67% were HR + and 32% were HR neg
    • ER, PR, and HER2 negative (triple negative) cancers comprised 13%

Government/society recommendations for routine mammographic screening in women at average risk

<table>
<thead>
<tr>
<th>Group (date)</th>
<th>Frequency of screening (yr)</th>
<th>Initiation of screening</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>40-49 yr of age</td>
</tr>
<tr>
<td><strong>Government-sponsored groups</strong></td>
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<td></td>
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<tr>
<td>US Preventive Services Task Force (2009)</td>
<td>2</td>
<td>Individualize*</td>
</tr>
<tr>
<td>Canadian Task Force on Preventive Health Care</td>
<td>2-3</td>
<td>Recommend against*</td>
</tr>
<tr>
<td>(2011)</td>
<td></td>
<td></td>
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<tr>
<td>National Cancer Institute (2010)</td>
<td>1-2</td>
<td>Yes</td>
</tr>
<tr>
<td>Advisory Committee on Cancer Prevention in the EU</td>
<td>2-3</td>
<td>No*</td>
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<tr>
<td>National Health Service, United Kingdom (2011)</td>
<td>3</td>
<td>Yes, start age 47</td>
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<tr>
<td><strong>Medical societies</strong></td>
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<tr>
<td>American College of Obstetricians and Gynecologists (2011)</td>
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<td>Yes</td>
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<tr>
<td>American Medical Association (2002)</td>
<td>1</td>
<td>Yes</td>
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<tr>
<td>American College of Physicians (2007)</td>
<td>1-2</td>
<td>Individualize*</td>
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<td>American Academy of Family Physicians (2009)</td>
<td>1-2</td>
<td>Individualize*</td>
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<td>American Cancer Society (2010)</td>
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<td>Yes</td>
</tr>
<tr>
<td>American College of Radiology (2010)</td>
<td>1</td>
<td>Yes</td>
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<tr>
<td><strong>Coalitions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Comprehensive Cancer Network (2011)</td>
<td>1</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* Woman should be counseled about the risks and benefits of mammography; individualized decision based on risk and patient preference.
* If done on women in their 40s, screening should be part of an organized program, done every 12 to 19 months, and include information about benefits and risks.
* Discuss with doctor and individualize decision after age 75.
DISORDERS OF THE UTERUS AND PELVIC PAIN

- Pelvic pain
- Dysmenorrhea
- Endometrial cancer
- Endometriosis
- Leiomyomata
- Prolapse
- Dyspareunia
DYSMENORRHEA

• Dyssmenorrhea
  • Primary
    • No identifiable cause
  • Secondary
    • Organic etiology
      • Endometriosis
      • PID
      • Fibroids
      • Adenomyosis
      • Ovarian Cysts
      • Pelvic congestion
PRIMARY DYSMENORRHEA

- Usually within first year or two of menarche
- Excess prostaglandins (responds well to NSAIDs)
  - Prostaglandin E2 and prostaglandin F2 alpha
- Related to menstrual cycle
- May have other systemic complaints
- Normal pelvic findings
- Tx with NSAIDs, OCPs, Progestins
SECONDARY DYSMENORRHEA

- Painful menses with pelvic pathology
- Dyspareunia usually accompanies secondary amenorrhea
## Causes of secondary dysmenorrhea

<table>
<thead>
<tr>
<th>Gynecologic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endometriosis</td>
</tr>
<tr>
<td>Adenomyosis</td>
</tr>
<tr>
<td>Fibroids</td>
</tr>
<tr>
<td>Ovarian cysts</td>
</tr>
<tr>
<td>Intrauterine or pelvic adhesions</td>
</tr>
<tr>
<td>Chronic pelvic inflammatory disease</td>
</tr>
<tr>
<td>Obstructive endometrial polyps</td>
</tr>
<tr>
<td>Congenital obstructive müllerian malformations</td>
</tr>
<tr>
<td>Cervical stenosis</td>
</tr>
<tr>
<td>Use of an intrauterine contraceptive device</td>
</tr>
<tr>
<td>Pelvic congestion syndrome</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nongynecologic</th>
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</thead>
<tbody>
<tr>
<td>Inflammatory bowel disease</td>
</tr>
<tr>
<td>Irritable bowel syndrome</td>
</tr>
<tr>
<td>Uteropelvic junction obstruction</td>
</tr>
<tr>
<td>Psychogenic disorders</td>
</tr>
</tbody>
</table>
ENDOMETRIOSIS

• Pelvic pain, dysmenorrhea, dyspareunia, infertility, bowel/bladder pain
• Tenderness, nodules on uterosacral ligament
• Tenderness posterior vaginal fornix
• Dx with laparoscopy
TREATMENT OF ENDOMETRIOSIS

• Analgesia – NSAIDS, not opioids
• Estrogen-progestin oral contraceptives, cyclic or continuous
• Progestin-only
• Gonadotropin-releasing hormone (GnRH) agonists (i.e. Danazol) or Analog (Leuprolide acetate) – suppresses FSH/LH
PID

- GC/CT usual culprits
- Pelvic pain, dyspareunia
- May have fever, chills, vag discharge
- Cervical Motion Tenderness
CDC GUIDELINES FOR “DEFINITIVE DX”

- Histologic evidence of endometritis in a biopsy
- An imaging technique revealing thickened fluid-filled tubes/oviducts with or without free pelvic fluid or tuboovarian complex
- Laparoscopic abnormalities consistent with PID (eg, tubal erythema, edema, adhesions; purulent exudate or cul-de-sac fluid; abnormal fimbriae)
• **Treatment:**
  - **Inpatient tx** with IV cefoxitin (2 grams every 6 hours) plus doxycycline (100 mg BID for 14 days)
  - **Outpatient tx** with a single IM dose of cefoxitin (2 grams) plus a single dose of oral probenicid (1 gram) plus oral doxycycline (100 mg BID for 14 days)
  - **Outpatient tx** with ceftriaxone (250 mg IM in a single dose) plus doxycycline (100 mg BID for 14 days)
  - **If pelvic abscess:** add clindamycin 450 mg Q 6 hours or metronidazole 500 mg Q 8 hours x 14 days + doxycycline
  - **CAVEATS:** PREGNANCY, PCN-ALLERGY
• Consider admission:
  - Pregnancy
  - Lack of response or tolerance to oral medications
  - Nonadherence to therapy
  - Inability to take oral medications due to nausea and vomiting
  - Severe clinical illness (high fever, nausea, vomiting, severe abdominal pain)
  - Complicated PID with pelvic abscess (including tuboovarian abscess)
  - Possible need for surgical intervention or diagnostic exploration for alternative etiology
ADENOMYOSIS

• Endometrial glands and stroma are present within the uterine musculature
INTERSTITIAL CYSTITIS

Clinical symptoms at the diagnosis of interstitial cystitis/bladder pain syndrome

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Patients (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary urgency</td>
<td>57-98</td>
</tr>
<tr>
<td>Daytime frequency</td>
<td>84-97</td>
</tr>
<tr>
<td>Pain</td>
<td>66-94</td>
</tr>
<tr>
<td>Nocturia</td>
<td>44-90</td>
</tr>
<tr>
<td>Pain with voiding/dysuria</td>
<td>71-98</td>
</tr>
<tr>
<td>Suprapubic pain</td>
<td>39-71</td>
</tr>
<tr>
<td>Perineal pain</td>
<td>25-56</td>
</tr>
<tr>
<td>Patient sensation of bladder spasms</td>
<td>50-74</td>
</tr>
<tr>
<td>Pubic pressure</td>
<td>60-71</td>
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<tr>
<td>Dyspareunia</td>
<td>46-80</td>
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<tr>
<td>Depression</td>
<td>55-67</td>
</tr>
<tr>
<td>Gross hematuria</td>
<td>14-33</td>
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</tbody>
</table>

From: Teichman JM, Parsons CL. Contemporary clinical presentation of interstitial cystitis. Urology 2007; 69:41. Table used with the permission of Elsevier Inc. All rights reserved.
INTERSTITIAL CYSTITIS

• Often a dx of exclusion
• Cystoscopy often used
• Treatment: avoid common irritants (caffeine, alcohol, artificial sweeteners, hot pepper)
  • PT
  • Pentosan tid dosing, may take 3-6 months to work
    • Pentosan adheres to the bladder wall mucosa where it may act as a buffer to protect the tissues from irritating substances in the urine
ENDOMETRIAL HYPERPLASIA

• Unopposed estrogen
• Seen commonly in PCOS, obesity, tamoxifen/SERM use
• TransVag Ultrasound: endometrial stripe >4mm in postmenopausal pt is suspicious (ACOG), >5 mm (SRU)
• Pay attention to when in menstrual cycle ultrasound is done
• Need tissue to dx (EMB and/or dilation and curettage)
ENDOMETRIAL CANCER

• The most common GYN malignancy
• Usually nontender initially
• Abnormal uterine bleeding in 75-90% of cases
• If woman <50 y/o, check for Lynch Syndrome
LEIOMYOMA

Fibroid locations in the uterus

These figures depict the various types and locations of fibroids. A woman may have one or more type of fibroid.
LEIOMYOMA

- Usually not painful unless torsion or nerve compression occurs
- Risk factors: “early” menarche, black, family history
TX OF LEIOMYOMA

• Medical
• Surgery
  • Hysterectomy vs myomectomy
• Uterine artery embolization
• Decision based upon location/fertility
UTERINE PROLAPSE

• **1<sup>st</sup> degree**: The cervix drops into the vagina.
• **2<sup>nd</sup> degree**: The cervix sticks out of the opening of the vagina.
• **3<sup>rd</sup> degree**: Part of the uterus is outside the vagina.
• **Procidentia**: Entire uterus is out
• **Tx depends upon degree and QOL issues**
  • Non-surgical (Pessary)
  • Surgical

Classification of Prolapse

Anterior Vaginal Wall:
Upper Two-Thirds-Cystocele.
Lower One-Third-Urethrocele

Posterior Vaginal Wall:
Upper One-Third-Enterocele (Pouch of Douglas Hernia)
Lower Two-Thirds-Rectocele

Uterine Descent:
1° ↔ Descent of the Cervix in the Vagina.
2° ↔ Descent of the Cervix to the Introitus.
3° ↔ Descent of the Cervix outside the Introitus.
Procidentia- All of the Uterus outside the Introitus.

Note the descent of the cervix which is accompanied by stretching of the ligaments and by supravaginal elongation of the cervix.
PROCIDENTIA
Complete protrusion of the uterus and vagina

Source: Menopause © 2009 The North American Menopause Society
UTERINE BLEEDING DISORDERS

• Amenorrhea
  • Primary: absence of menarche by 2 yrs post thelarche (or by age 16)
  • Secondary: absence of menses x 6 months
• Oligomenorrhea- menses occurring > q 35 d
• Menometrorrhagia- excessive/prolonged bleeding at irregular intervals
• DUB – irregular bleeding in the absence of known etiology
• Postmenopausal bleeding – bleeding after menopause (12 months of amenorrhea)
• What is the most common cause of secondary amenorrhea?
WORK-UP OF AMENORRHEA

• Physical exam:
  • BMI
  • Breast development
  • Thyroid
  • Skin
  • Webbed neck, low set ears, short stature
  • Pelvic exam
  • Labs