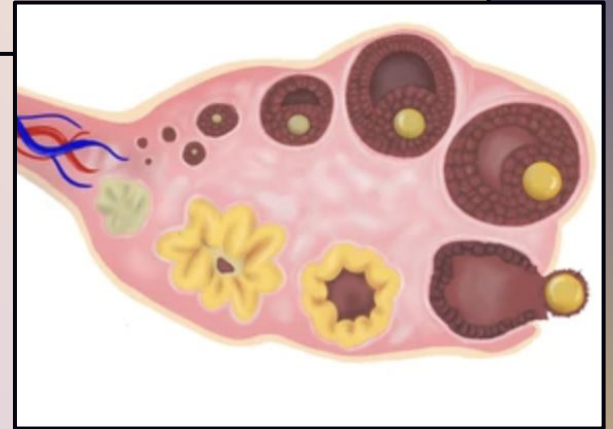


# OVARIAN CYSTS

## COMMON QUESTIONS, INFORMATIVE ANSWERS

SHIRA GOLD, MD, FRCSC



# CONFLICTS OF INTEREST

NONE

# OBJECTIVES

01

## PATHOPHYSIOLOGY

Understand why ovarian cysts occur

02

## APPROACH

Initiate an appropriate workup for ovarian cysts

03

## MANAGEMENT

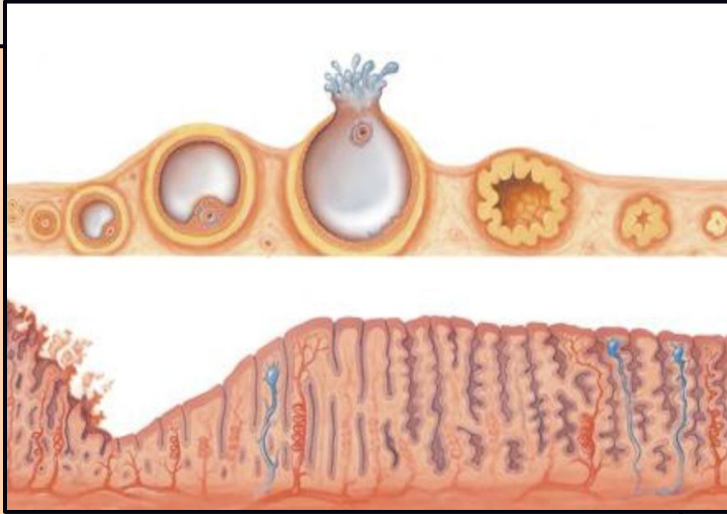
What to do and when to refer

04

## PREVENTION

Think about cyst suppression

# INTRODUCTION



UP TO 10% OF WOMEN WILL HAVE SURGERY IN  
THEIR LIFETIME FOR OVARIAN CYSTS

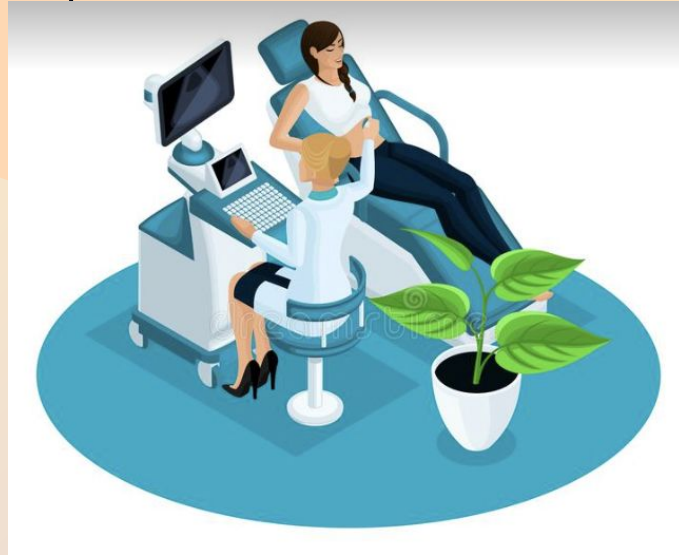
## **OVARIAN CANCER:**

AFFECTS 2800 WOMEN IN CANADA PER YEAR  
5TH LEADING CAUSE OF CANCER DEATH IN  
WOMEN

**01**

# PATHOPHYSIOLOGY

Why do ovarian cysts occur?



# TYPES OF CYSTS

## FUNCTIONAL CYSTS

**OCCUR IN RESPONSE TO OVULATION**

- FOLLICULAR/SIMPLE CYST
- HEMORRHAGIC CYST
- CORPUS LUTEUM

## NON-FUNCTIONAL CYSTS

**ARE NOT RELATED TO  
OVULATION**

- MATURE TERATOMA
- ENDOMETRIOMA
- CYSTADENOMA
- FIBROMA

# 02

## ASSESSMENT

### PRIMARY GOALS

- RULE OUT OVARIAN CANCER
- CHARACTERIZE CYST

# PATIENT ASSESSMENT

- HISTORY
- PHYSICAL EXAM
- INVESTIGATIONS
  - IMAGING
  - BLOODWORK

# HISTORY

- SYMPTOMS
- HISTORY OF ENDOMETRIOSIS OR INFERTILITY
- PERSONAL OR FAMILY HISTORY OF CANCER

# PHYSICAL

- VITALS, WEIGHT
- ABDOMINAL EXAM: TENDERNESS, ASCITES, MASSES
- PELVIC EXAM: MASSES, TEXTURE, MOBILITY, TENDERNESS
- LYMPH NODES

# INVESTIGATIONS

- **ULTRASOUND**
- MRI
- TUMOUR MARKERS
  - CA-125
  - CEA, CA 19-9, CA 15-3
  - GERM CELL/SERTOLI-LEYDIG MARKERS
  - MARKER PANELS

# NOT ALL ULTRASOUNDS ARE CREATED EQUAL

EXPERT SONOGRAPHY CAN  
DISTINGUISH BENIGN FROM  
MALIGNANT IN 96.7% OF CASES

IOTA RULES, O-RADS



# MRI ONLY AFTER EXPERT SONOGRAPHY

- DECREASES RISK OF MISDIAGNOSING BENIGN MASS AS MALIGNANT
- INCREASES SPECIFICITY OF BENIGN DIAGNOSES

# TUMOUR MARKERS

- **CA-125**
  - GLYCOPROTEIN ELEVATED IN OVARIAN/FALLOPIAN/PERITONEAL CANCER
  - NOT A SCREENING TOOL!
  - USED IN RISK CALCULATIONS: RMI (OVA1, ROMA)
- CEA, CA 19-9, CA15-3
  - WHEN CONSIDERING METASTASIS FROM OTHER PRIMARY
- HCG, LDH, AFP, INHIBIN
  - IF UNDER 40, CONSIDER GERM CELL TUMOURS
- INHIBIN, TESTOSTERONE, ESTROGEN
  - IF SUSPICIOUS FOR SERTOLI-LEYDIG TUMOURS

# MANAGEMENT

**01**

**IS THE PATIENT  
SYMPTOMATIC?**

**02**

**WHAT IS THE  
MENOPAUSAL  
STATUS?**

# ASYMPTOMATIC CYSTS

## Simple or unilocular cyst

Conservative management recommended for benign appearing cysts up to 10 cm

Low risk of malignancy (<1%)

Annual sonographic follow-up

## Hemorrhagic cyst

### Premenopausal

- Initial repeat sonographic evaluation at 8-12 weeks to assess for resolution in the premenopausal woman.
- Consider endometrioma if persistent lesion on sonographic imaging follow-up

Post-menopausal  
Further investigation is warranted

## Endometrioma

Initial repeat sonographic evaluation at 8-12 weeks

Annual sonographic follow-up for stable lesions

Consider referral to a gynecologist with expertise in endometriosis

## Mature cystic teratoma

Initial repeat sonographic evaluation at 8-12 weeks

Annual sonographic follow-up for stable lesions

**SOGC 404**

## Fibroma

Initial repeat sonographic evaluation at 8-12 weeks

"Classic appearing" benign fibromas have a higher risk of malignancy than other types of sonographically characterized benign lesions, up to 2% in postmenopausal women

Consider expert consultation for management of solid tumors

# SIMPLE CYST

- CONSERVATIVE MANAGEMENT RECOMMENDED FOR SIMPLE CYSTS UP TO 10 CM
- LOW RISK OF MALIGNANCY (<1%)
- CONSIDER ANNUAL SURVEILLANCE

# HEMORRHAGIC CYST

- PREMENOPAUSAL
  - INITIAL REPEAT IN 8–12 WEEKS TO ASSESS FOR RESOLUTION
  - CONSIDER ENDOMETRIOMA IF PERSISTENT ON REPEAT IMAGING
- POSTMENOPAUSAL
  - FURTHER INVESTIGATION, CONSIDER REMOVAL

# ENDOMETRIOMA

- INITIAL REPEAT IN 8-12 WEEKS
- ANNUAL SONOGRAPHIC FOLLOW-UP FOR STABLE LESIONS
- CONSIDER REFERRAL TO GYNECOLOGIST WITH EXPERTISE IN ENDOMETRIOSIS MANAGEMENT

# MATURE CYSTIC TERATOMA

- INITIAL REPEAT IN 8-12 WEEKS
- ANNUAL SONOGRAPHIC FOLLOW-UP FOR STABLE LESIONS
- COUNSEL ABOUT RISK OF OVARIAN TORSION IF >5CM

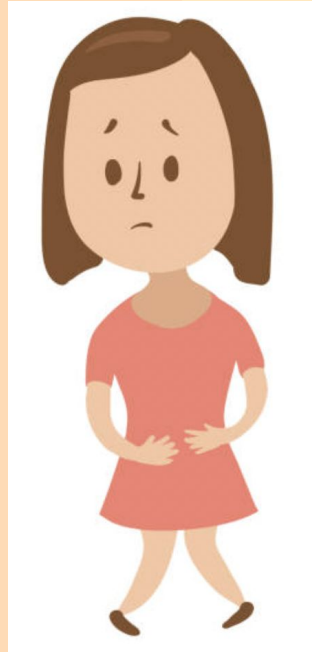
# FIBROMA

- INITIAL REPEAT IN 8-12 WEEKS
- HAVE HIGHER RISK OF MALIGNANCY THAN OTHER CLASSICALLY BENIGN CYSTS, UP TO 2% IN POSTMENOPAUSAL PATIENTS
- CONSIDER GYNECOLOGIC REFERRAL

# MONITORING CONSIDERATIONS

- TORSION
  - 80% OCCUR WHEN OVARY  $\geq$ 5CM
  - MATURE TERATOMAS, MATURE TERATOMAS, SEROUS CYSTADENOMA
- CYST RUPTURE OR HEMORRHAGE
  - PHYSIOLOGIC EVENTS
  - SURGERY IF: HEMODYNAMIC COMPROMISE, ACTIVE BLEEDING, PERSISTENT SYMPTOMS >48H, QUERY TORSION
- PSYCHOLOGICAL EFFECTS

# SYMPTOMS OF OVARIAN CYSTS



Pelvic pain



GI/GU  
symptoms

Dysmenorrhea



Abnormal uterine  
bleeding



Abdominal  
fullness/pressure



Dyspareunia

# SYMPTOMATIC CYSTS

## GOALS OF SURGERY:

- COMPLETELY REMOVE THE MASS
- PATHOLOGIC DIAGNOSIS
- REDUCE RISK OF RECURRENCE
- PRESERVE HEALTHY OVARIAN TISSUE\*

# SURGERY

**PREMENOPAUSAL**

OVARIAN CYSTECTOMY

**POSTMENOPAUSAL**

BILATERAL  
SALPINGO-OOPHERECTOMY

# CYST PREVENTION

FOR FUNCTIONAL CYSTS,  
CONSIDER CHC IF:

- PATIENT PREFERENCE
- RECURRENT HEMORRHAGIC CYSTS OR CYST RUPTURE
- IF PREDISPOSED TO BLEEDING

\* PROGESTERONE ONLY METHODS INCREASE RISK OF OVARIAN CYSTS



**THANKS!**

# RESOURCES

SOGC 403: INITIAL INVESTIGATION AND MANAGEMENT OF ADNEXAL MASSES

SOGC 404: INITIAL INVESTIGATION AND MANAGEMENT OF BENIGN ADNEXAL MASSES

ACOG PRACTICE BULLETIN 174: EVALUATION AND MANAGEMENT OF ADNEXAL MASSES

GREENTOP GUIDELINE 62: MANAGEMENT OF SUSPECTED OVARIAN MASSES IN PREMENOPAUSAL WOMEN

GREENTOP GUIDELINE 34: MANAGEMENT OF OVARIAN CYSTS IN POSTMENOPAUSAL WOMEN