

# Investigation of Adnexal Masses

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17 September 2015

# Aims

- ◆ Primary Care
- ◆ Secondary Care
- ◆ Screening for Ovarian Cancer?

# Red flag symptoms



## ◆ Stage 1 (30%; 90% FYS)

- Pain in the lower abdomen or side
- Bloating, full feeling in the abdomen

## ◆ Stage 2 (4%; 40% FYS) or 3 (40%; 20% FYS)

- Irregular periods or PMB
- Abdominal/Back pain
- Urinary frequency
- Constipation
- Pain during sex
- A swollen abdomen
- Feeling of fullness or loss of appetite

## ◆ Stage 4 (15%; 5% FYS) -as for stage 2/3 plus:

- Tiredness
- N&V
- SOB



USS, CA125,  
CT

# Primary Care

- ◆ What should you do if you identify a pelvic or abdominal mass and/or ascites?
  - Refer woman urgently to Gynae oncology team on a 2 week wait

# Primary Care

## ◆ What should you do if a woman has symptoms of ovarian cancer?

- Persistent distension/bloating
  - Feeling full (early satiety), anorexia
  - Pelvic pain
  - Increased urgency/frequency
- 
- ≥12  
per  
month
- New onset IBS over 50y
  - Unexplained weight loss / fatigue / changes in bowel habit

# Primary Care - NICE 2014

- ◆ CA125
- ◆ If abnormal – USS
- ◆ If USS suggests Ovarian Ca – refer
- ◆ If USS normal - ?
  - NICE does not advise referral for raised CA125 if scan is normal
  - Assess for other causes of abnormal CA125
  - If no other identifiable cause – ask patient to return to GP if symptoms become more frequent or persist

# CA125 is not a screening test!

A screening test should be:



◆ Cheap



◆ Easy to perform



◆ Minimal discomfort



◆ Reliable

(same result every time)



–Valid

◆ Sensitivity  
72%

◆ Specificity  
78%

◆ PPV 72%

◆ NPV 78%

# What causes a raised CA125?

## Non-malignant

- ◆ Benign ovarian tumours
- ◆ PID / Salpingitis
- ◆ Pregnancy
- ◆ Periods
- ◆ Fibroids
- ◆ Endometriosis
- ◆ Ascites
- ◆ Inflammation
- ◆ Diverticulosis
- ◆ Pleural disease
- ◆ Pericardial disease
- ◆ Pancreatitis
- ◆ Heart failure

## Malignant

- ◆ Ovarian cancer 80%  
(**late non-mucinous ovarian epithelial cancer**)
- ◆ Uterine cancer
- ◆ Pancreatic cancer
- ◆ Stomach cancer
- ◆ Colon cancer
- ◆ Rectal cancer
- ◆ Intra-abdominal mets (e.g. breast)

# Secondary Care – management

- ◆ Premenopausal

or

- ◆ Postmenopausal

- We have taken our local guidelines from NICE and RCOG guidelines

# General recommendations

- ◆ Transvaginal scan is as good as MRI
- ◆ Tumour markers should be assessed in all but simple cysts <70mm in premenopausal women.
- ◆ **Intermediate risk for Malignancy** on USS should undergo MRI pelvis for further characterisation
- ◆ **High risk of Malignancy** need staging CT scan
- ◆ Asymptomatic, Low risk / benign cysts < 70mm with normal tumour markers can be managed conservatively with repeat TVS in 3-4 months
- ◆ Symptomatic cysts or Low risk / benign cysts > 70mm (>50mm in postmenopausal) should be offered surgical management

# Premenopausal

- ◆ Ultrasound reporting should clearly state presence or absence of B and / or M features in its conclusion according to IOTA simple rules into risk groups and manage appropriately.
- ◆ CA125, LDH,  $\alpha$ FP and  $\beta$ hCG should be measured in all women under the age of 40 with a complex ovarian mass

## IOTA Group ultrasound simple rules to classify masses as benign (B-rules) or malignant (M-rules)

<b>B- rules</b>	<b>Presence</b>	<b>M-rules</b>	<b>Presence</b>
Unilocular cyst		Irregular solid tumour	
Solid components <7mm		Ascites	
Acoustic shadowing		At least 4 papillary structures	
Smooth multilocular tumour <100 mm		Irregular multilocular tumour >100 mm	
No internal vascularity		Increased internal vascularity	
<b>Total score B</b>		<b>Total score M</b>	

# Interpreting the IOTA rules

- ◆ Premenopausal women with only B features present in their USS are considered: Low risk for malignancy
- ◆ Premenopausal women with any M features present in their USS and absent any B feature are considered High risk for malignancy – **Referred to Gynae oncology**
- ◆ Premenopausal women with any combination of M and B features in their USS are considered: Intermediate Risk for malignancy – **Refer to Gynae for MRI and MDT as required**

# Low risk of malignancy, Premenopausal

- ◆ < 30 mm simple cyst (all B features) in premenopausal ♀ ; no monitoring or follow-up
- ◆ 30 – 70 mm a further TVS should be arranged after 4 months and if cyst remains unchanged, a repeat USS 4 monthly intervals for 1 year. If there are no changes, patient should be reassured and discharged.
- ◆ If cyst changes, then tumour markers should be repeated and General Gynaecologist should reassess risk category and follow pathway again.

# Postmenopausal

- ◆ Ultrasound reporting should clearly state U score (0,1 or 3) in its conclusion classify premenopausal patient according to their RMI
  - ◆ RMI <25 – 3% have cancer
  - ◆ RMI 25-250 – 20% have cancer
  - ◆ RMI >250 – 75% have cancer
- ◆ Where RMI >250 (200\*) CT staging recommended along with gynaecological oncology MDT referral

\* Current review of RCOG guideline in progress – draft alterations quoted in yellow above

# Calculating RMI

**RMI = U (0, 1 or 3) x M (3 post menopausal) x Ca125 in u/ml**

		presence
USS features	multilocular	1
	Solid areas	
	ascites	
	bilateral	1
	metastases	
U score (0 if 0, 1 if 1, 3 if 2-5 features present)		3

**RMI = 3 x 3 x 75 = 675 = High risk**

# Low Risk of malignancy; Postmenopausal

- ◆ < 20 mm simple cyst (U score 0) in postmenopausal women requires no monitoring or follow-up and can be discharged.
- ◆ 20 – 70 mm (<50mm)\*, repeat TVS 4 -6 monthly intervals (with CA125)\* for a maximum period of one year. If there are no changes, patient should be reassured and discharged.
- ◆ If the cyst changes, then CA125 should be repeated and General Gynaecologist should reassess risk category and follow pathway again.

\* Current review of RCOG guideline in progress – draft alterations quoted in yellow above

# To screen or not to screen?

- ◆ What should you do with the patient who asks you to screen for ovarian cancer?



# CA125? USS? Nothing?

- ◆ CA125 is a late marker of disease and is not sensitive or specific enough to be a valid screening test
- ◆ Some /many ovarian cancers are likely to be tubal in origin so scan may be negative in early disease
- ◆ So far no evidence that any screening is useful in reducing morbidity or mortality
- ◆ Annual screening in high risk women has not proven useful (UKFOCCS 1)
- ◆ Current trials looking at 4 monthly screening (UKFOCCS 2)
- ◆ Must consider the negative impact of screening (emotional, impact of unnecessary intervention)

# UKFOCSS Inclusion Criteria - High Risk Families

<http://www.uhb.nhs.uk/Downloads/pdf/CancerPbOvarianCancerFamilialRisk.pdf>

Practitioners may choose to refer patients to the UHL Genetics Unit in the following circumstances:

- ◆ 1 ovarian cancer +1 breast cancer (at <50y) in 1<sup>st</sup> degree relatives
- ◆ 1 ovarian cancer +2 breast cancers(at <60y) in 1<sup>st</sup> degree relatives
- ◆ 2 or more cases of ovarian cancer in first degree relatives
- ◆ 1 ovarian cancer and 3 colorectal cancers (1 at <50y) in first degree relatives
- ◆ A documented mutation of a predisposing gene
- ◆ Where there are three or more first degree relatives, with other gastrointestinal renal, urinary tract, uterine or ovarian cancer at any age.
- ◆ Where there are three or more relatives with a combination of cancers of breast, ovary, prostate, pancreas, melanoma or thyroid.
- ◆ Individuals with an Eastern European/Jewish origin who do not meet the above criteria could still be considered because of their increased risk of BRCA1 and BRCA2 mutations.

A High risk individual is a first degree relative of affected members in such families. Evidence of paternal transmission also acceptable.

Must be 35 years or older for screening.

# Questions?

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# Summary

- ◆ CA125 for all cysts except simple cysts <7cm in premenopausal women
- ◆ Complex cysts <40y also do
  - LDH,  $\alpha$ FP and  $\beta$ hCG
- ◆ Judicious use of CA125
  - Assess for other causes of abnormal CA125 if scan normal
  - If no other identifiable cause – ask patient to return to GP if symptoms become more frequent or persist
  - NICE does not advise referral for raised CA125 if scan is normal