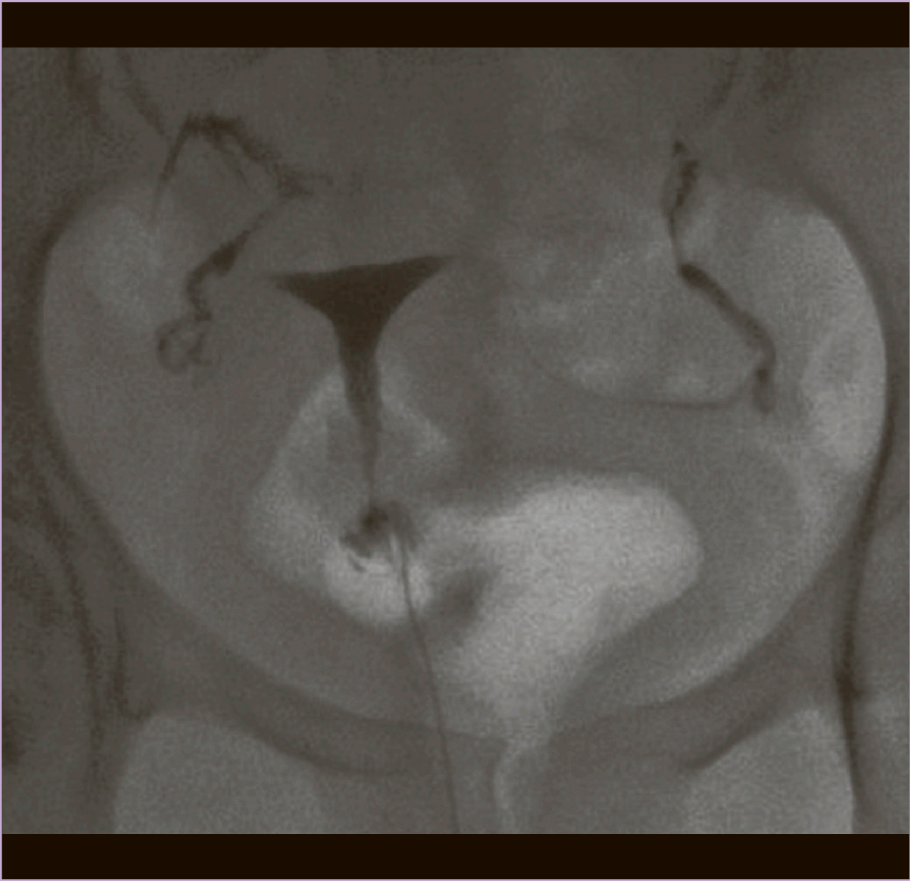
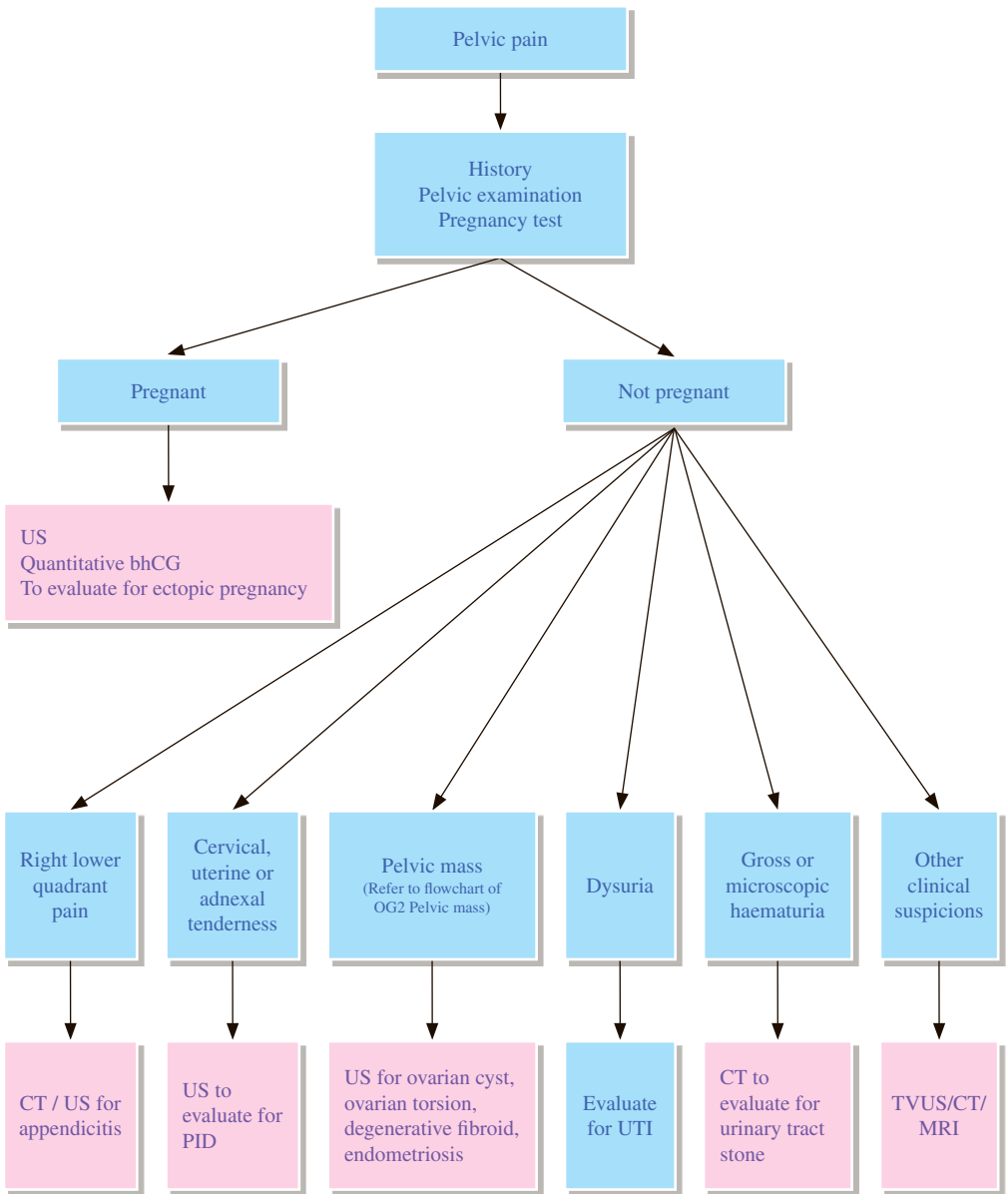


# Obstetric and Gynaecological Radiology



Hong Kong College of Radiologists



## REMARKS

### 1 General

- 1.1 Caution should be taken to avoid taking abdominal and pelvic radiographs during pregnancy.
- 1.2 With careful history taking, physical examination and simple laboratory tests, some of the causes of pelvic pain such as cystitis can be diagnosed without further radiological examinations.
- 1.3 Urgent life threatening conditions (e.g. ectopic pregnancy, appendicitis, ruptured ovarian cyst) and fertility-threatening conditions (e.g. pelvic inflammatory disease, ovarian torsion) must be considered.

### 2 Plain radiograph

- 2.1 Pelvic radiograph is useful to diagnose musculoskeletal causes of pelvic pain such as sacroiliac joint disease.

### 3 US

- 3.1 US should be initial imaging test due to its ability to narrow the differential diagnosis and lack of radiation exposure.
- 3.2 Transvaginal ultrasound (TVUS) has better resolution and is particularly useful for detailed pelvic assessment. However, owing to its limited penetrating power, large pelvic lesion may necessitate transabdominal ultrasound for complete visualisation.
- 3.3 For pelvic inflammatory disease (PID), a negative US examination does not rule out infection.
- 3.4 Colour Doppler is useful in detection of vascular lesion and determination of perfusion status in ovarian torsion.

### 4 CT

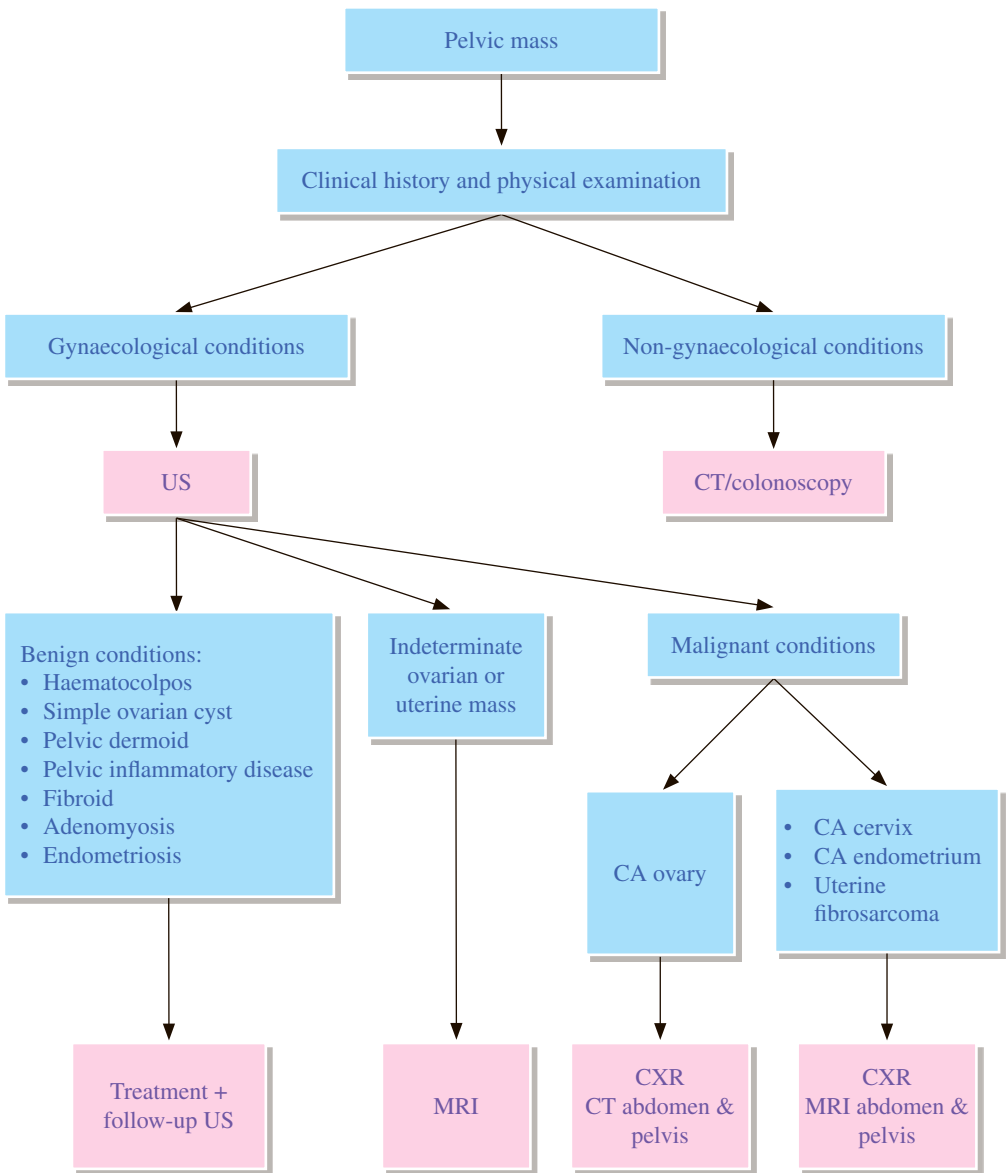
- 4.1 CT is more useful when gastrointestinal or urinary tract pathology is suspected.

### 5 MRI

- 5.1 With its high soft tissue contrast sensitivity, MRI is useful for further evaluation as a problem solving tool and assessment of the disease extent.
- 5.2 With its lack of ionizing radiation, MRI is preferred over CT for assessing pregnant patients; however, it is hampered by lack of widespread availability, especially in the acute setting.

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## **REMARKS**

### **1 US**

- 1.1 A pelvic US is the single most effective way of evaluating an ovarian mass with transvaginal US preferred due to its increased sensitivity over transabdominal US.
- 1.2 A combination of the transvaginal and transabdominal routes may be appropriate for the assessment of larger masses and extra-ovarian disease.
- 1.3 There is not yet a clearly established role for colour-flow Doppler in assessing ovarian cysts.
- 1.4 Ovarian cysts that persist or increase in size after several cycles are unlikely to be functional.
- 1.5 In large pelvic mass or suspected pelvic malignancy, renal areas should be examined to exclude hydronephrosis.
- 1.6 The routine use of CT and MRI for assessment of ovarian masses does not improve the sensitivity or specificity obtained by transvaginal US in the detection of ovarian malignancy.

### **2 CT**

- 2.1 CT is useful to delineate high pelvic or iliac fossa lesion, the tumour extent, and to assess metastasis.

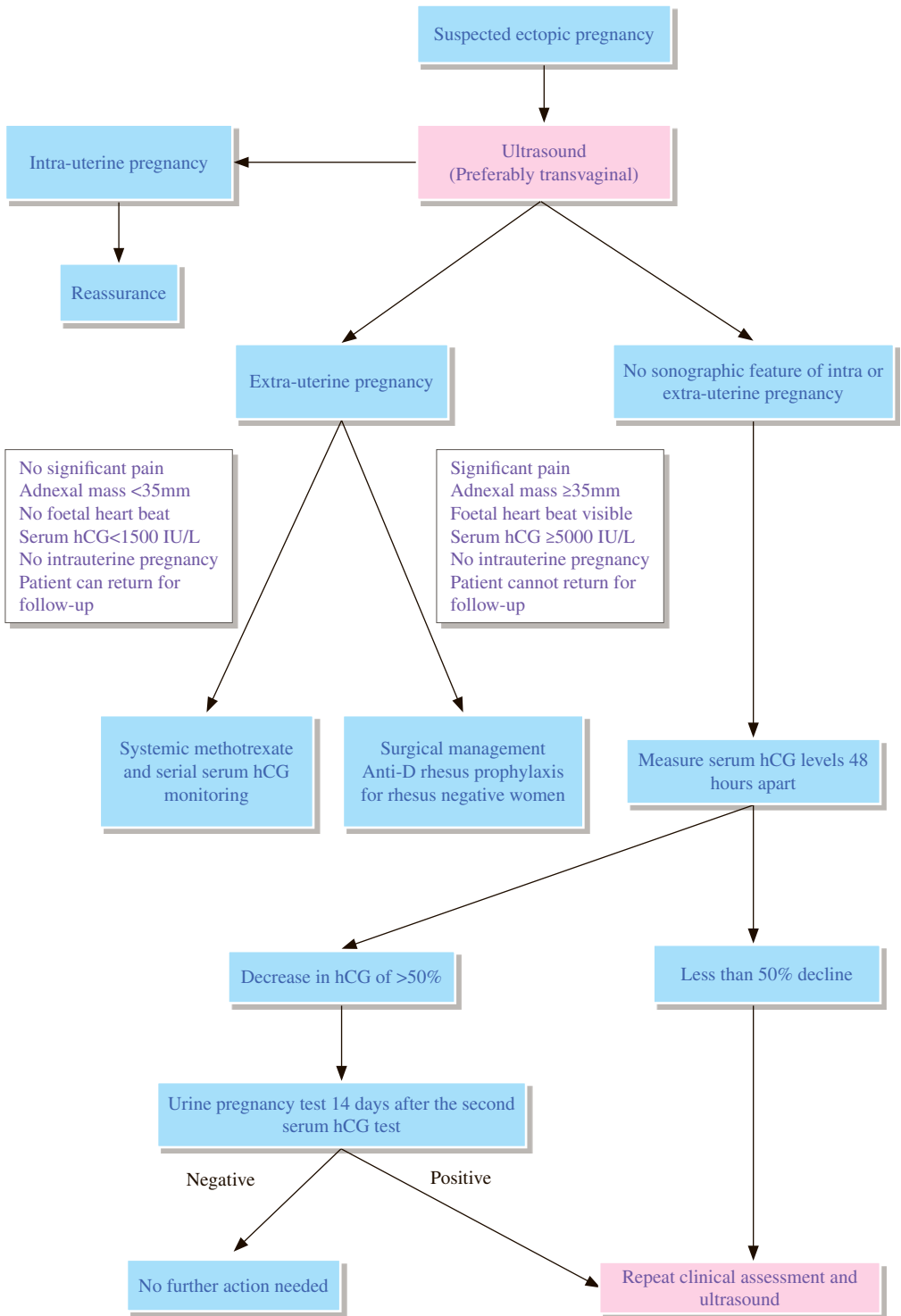
### **3 MRI**

- 3.1 With its high soft tissue contrast sensitivity, MRI is useful for further characterization of indeterminate ovarian or uterine mass and for local staging of uterine/cervical malignancy.
- 3.2 For workup of CA ovary, MRI is recommended for patients with a contraindication to the use of iodinated contrast agents (e.g. allergy, mild-to-moderate renal insufficiency), patients who are pregnant, patients of childbearing age with borderline tumours (to minimize ionizing radiation exposure).

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OG 3 Suspected ectopic pregnancy



## REMARKS

- 1 Heterotopic pregnancy occurs in only 1:7000 to 1:30000 of spontaneously conceived pregnancies. The chance is up to 1% in pregnancies after assisted reproduction techniques.
- 2 Apart from ectopic pregnancy, absence of intrauterine pregnancy can be due to wrong dates or complete miscarriage.
- 3 Failure to detect an intrauterine gestational sac by transvaginal ultrasound when serum hCG level is >1500 IU/L indicates an increased risk for ectopic pregnancy.

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