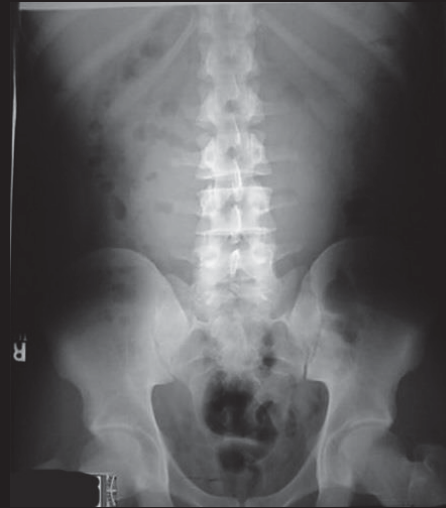


Basic Interpretation of Abdominal Radiographs (1)

腹部X光片基本判讀須知

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2017/11/18



Examination technique:
Plain abdomen
KUB

A radiograph of the kidneys, ureters, and bladder (KUB) demonstrates the:

1. Size
2. Shape
3. Position

What is normally visible	Conditions
1. Spleen	Y
2. Gallbladder	N
3. Stomach	Y with gas
4. Veins	N
5. Arteries	N if calcified
6. Small bowel	N gas is pathological
7. Colon (gas)	Y with gas
8. Bladder	Y with urine
9. Pancreas	N
10. Ureters	N
11. Kidneys	Y
12. Adrenal glands	N
13. Flank stripes	Y
14. Liver	Y

Radiographic Anatomy of the plain film abdomen

More Gas Patterns

Entire colon, from cecum to sigmoid, filled with gas.

Unless obstructed, **distention** of this degree *should* be relieved by **flatulence**

A child's stomach and colon filled with gas and feces, (speckled appearance).

Note how the hepatic flexure and transverse colon define the liver

Gas filled transverse colon demonstrating haustrations.

Detail of liver in RUQ

Detail of spleen in LUQ

Radiographic Anatomy of the plain film abdomen



Detail of flank stripe

Detail of urine filled bladder

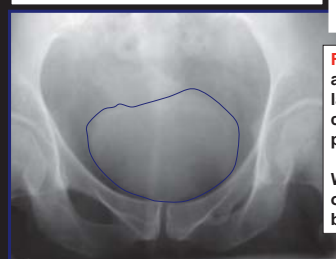
Radiographic Anatomy of the plain film abdomen

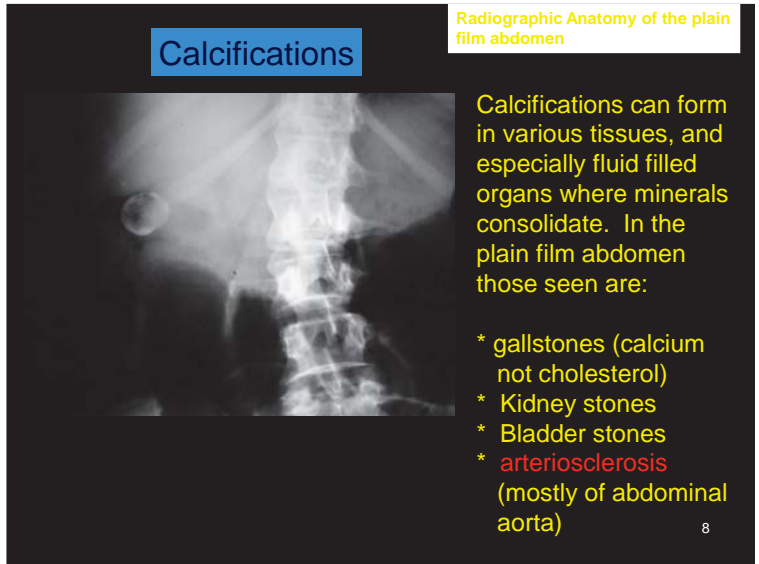
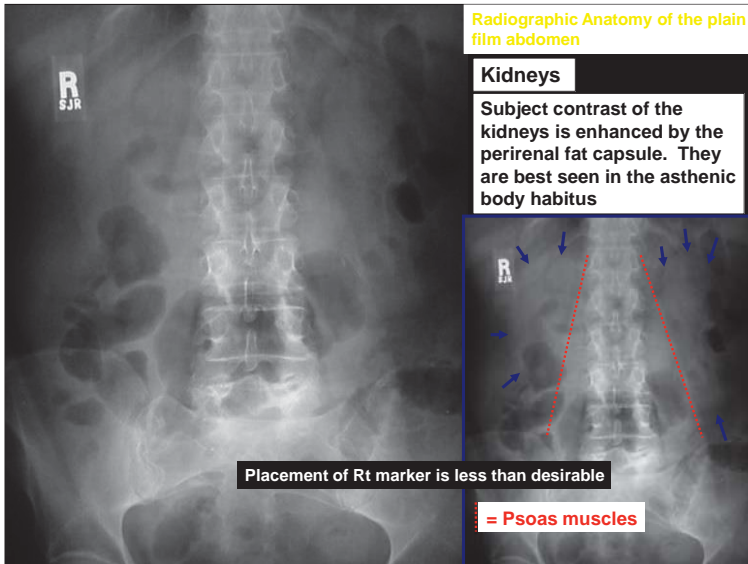
Flank stripes are not always seen due to lack of contrast or clipping on larger persons.

When visible, bowing of the stripes may be a sign of a **mass**.

The bladder is often seen, if contrasted by urine.

Gas in the sigmoid colon may obscure it





Indications for Abdominal X-ray

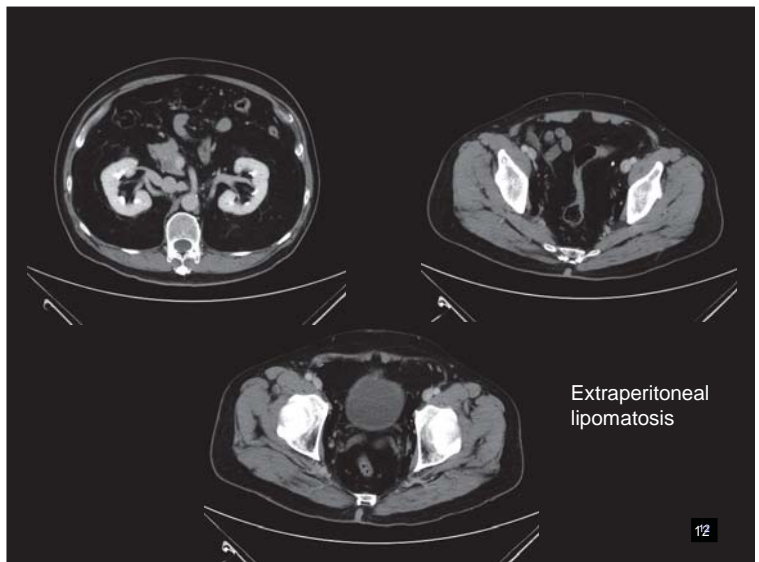
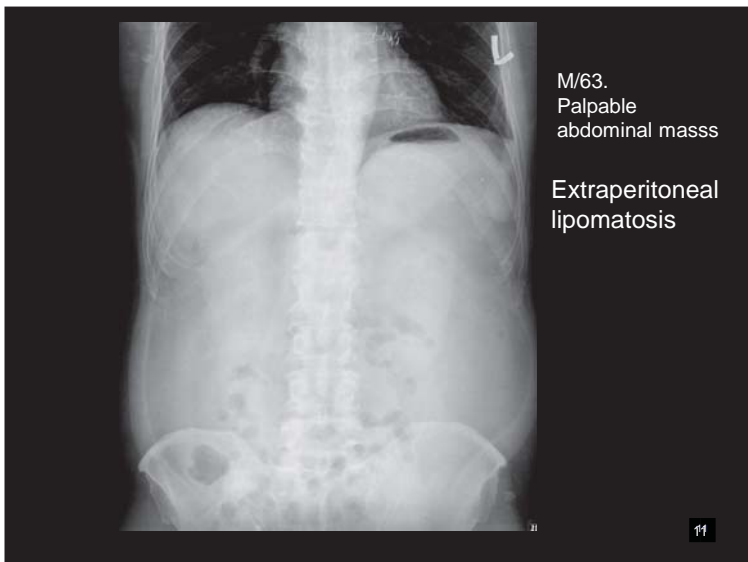
- useful for certain defined pathology such as abnormal 'gases, masses, bones and stones'.
- undifferentiated abdominal pain with a provisional diagnosis of:
 - Toxic megacolon in acute IBD
 - Bowel obstruction (50% sensitive for acute obstruction)
 - Bowel ischaemia
 - Perforation of a viscus with abdominal free air
 - KUB for renal tract calculi: 80–90% sensitivity if radiolucent stone >3 mm diameter.
 - Foreign body
- Radio-opaque medical related abdominal ingestions
- Radio-dense Tablets
 - Iron tablets
 - Potassium Chloride (KCL Tablets)
- Metals
 - Mercury
- Iatrogenic
 - Barium

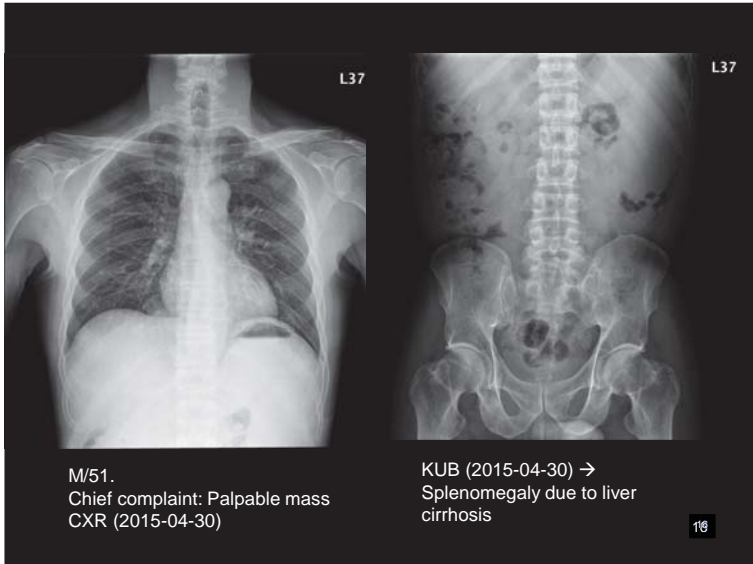
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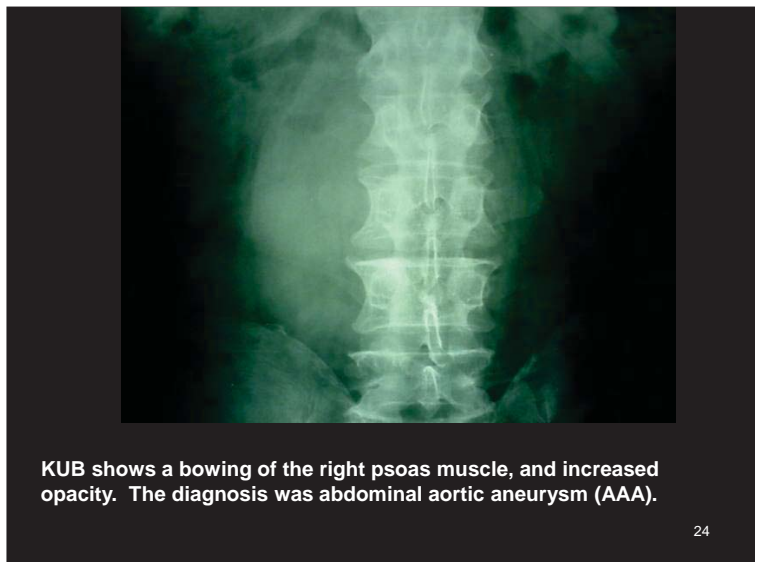
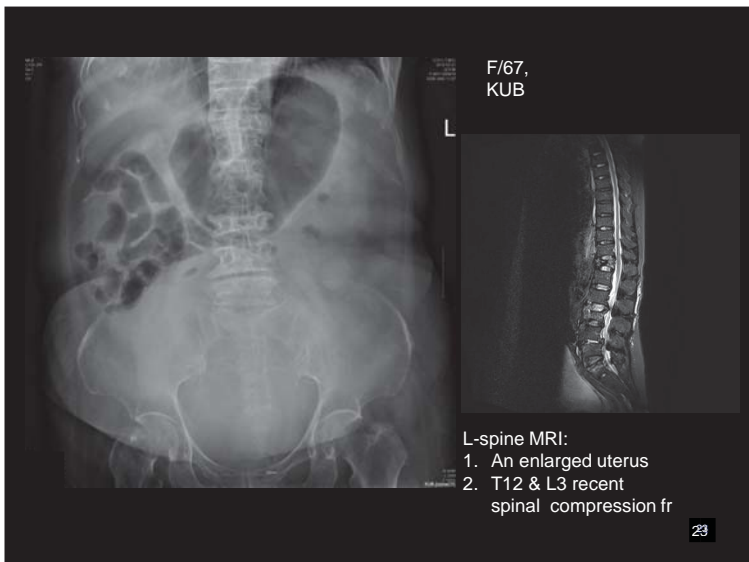
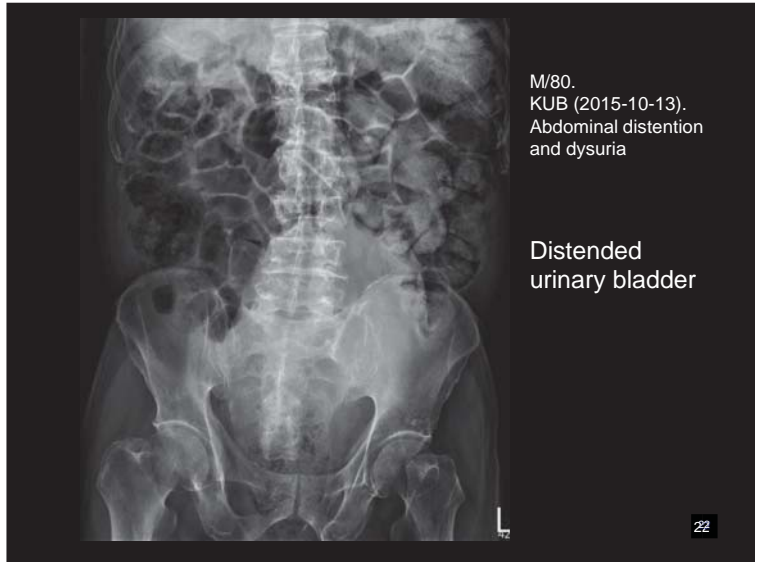
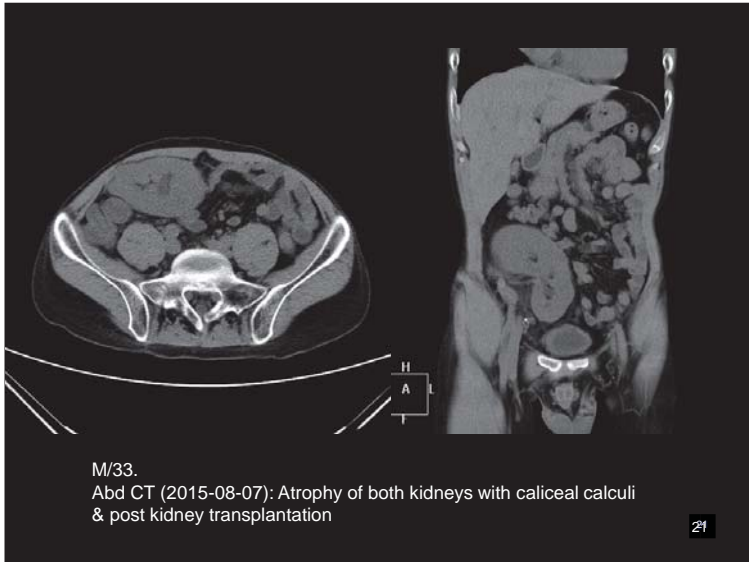
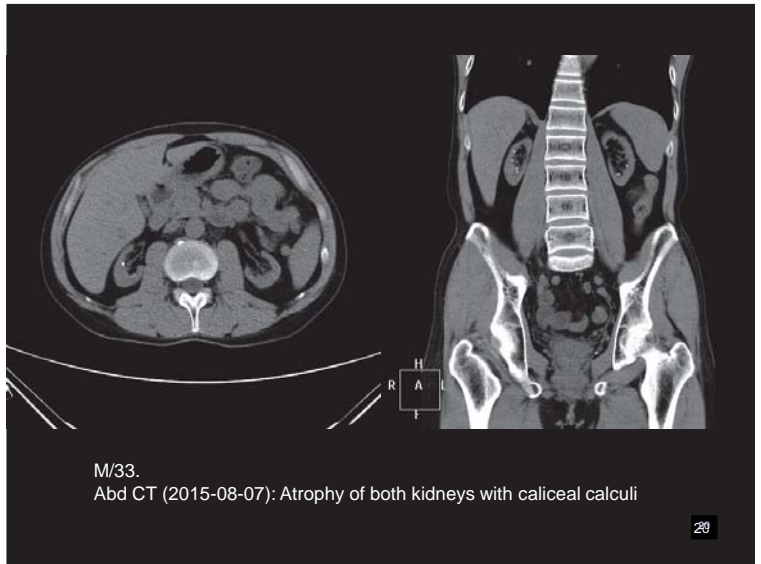
Plain Abdominal Radiographs

- Intraperitoneal and extraperitoneal spaces
- Abdominal organs
- Abdominal calcifications
- Bowel gas and fluid
- Abnormal gas collections
- Abdominal fluid
- Abdominal masses and foreign bodies
- Musculoskeletal structures & visible thorax

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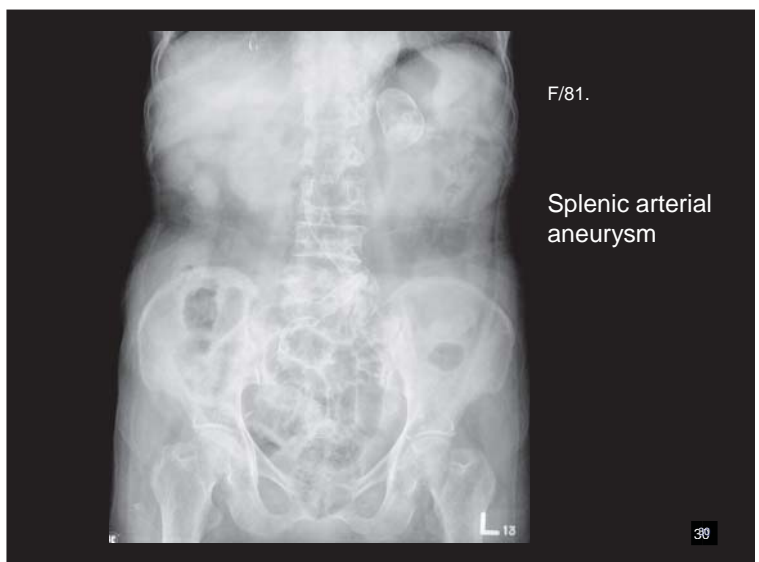
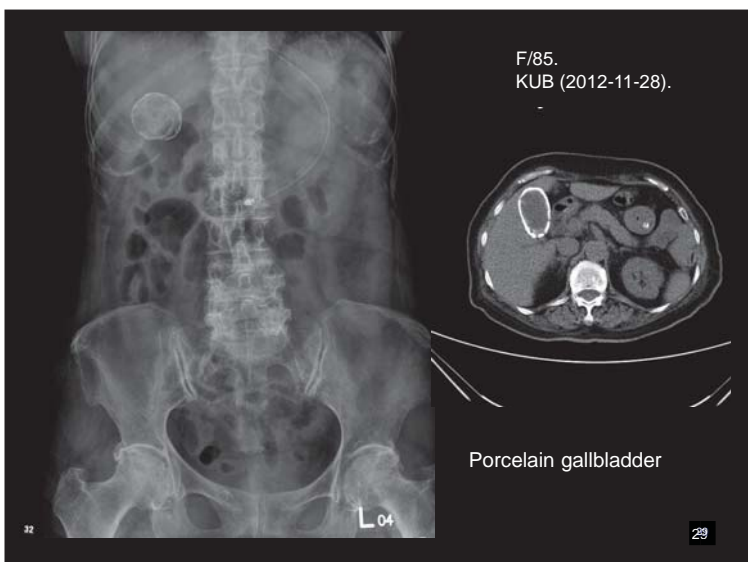
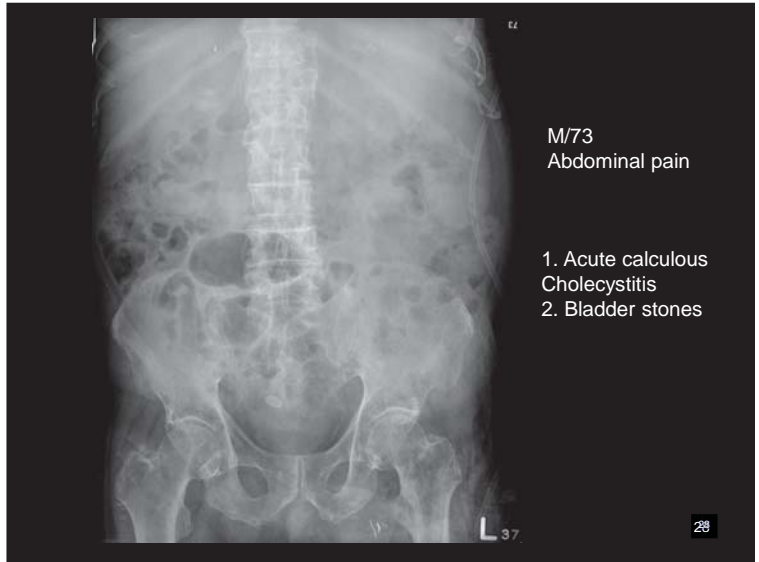
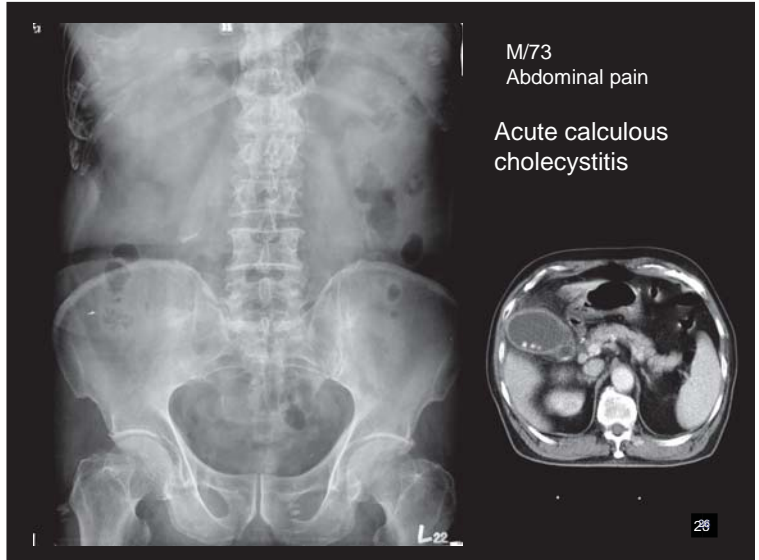




Intra-abdominal calcifications

- Calculi
- Vascular calcifications – arteries, veins
- Post infectious or inflammatory calcifications
- Dystrophic calcifications
- Calcifications of neoplasm

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M/72. Abdominal pain
KUB (2013-02-11)

M/72. KUB 2013-03-28)
Abdominal aortic aneurysm, post stenting,
Lt retroperitoneal abscess

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M/43
Abdominal pain

Chronic
pancreatitis
→ Typical coarse
calcifications at the
pancreas on plain
abdominal
presentation

32



F/47
CXR (2015-11-05)
for physical exam

1. Cardiomegaly with left ventricular hypertrophy
2. A subsegmental atelectasis at left lower lung field.
3. Chronic pancreatitis with coarse calcifications

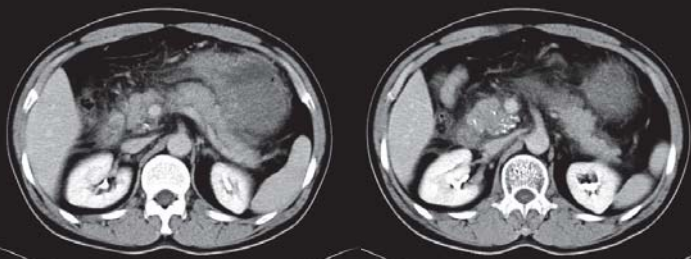
33



M/57.
Acute abdominal pain,
KUB (2015-10-01)

Abnormal coarse
calcifications at
upper abdomen

34



M/57. Acute abdominal pain 10 year ago → ER
Abdominal CT (2005-05-15): Chronic pancreatitis with relapse episode

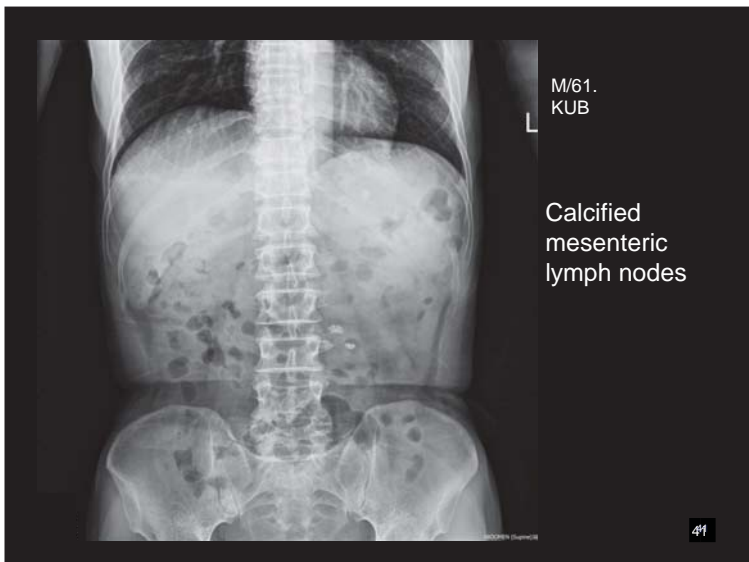
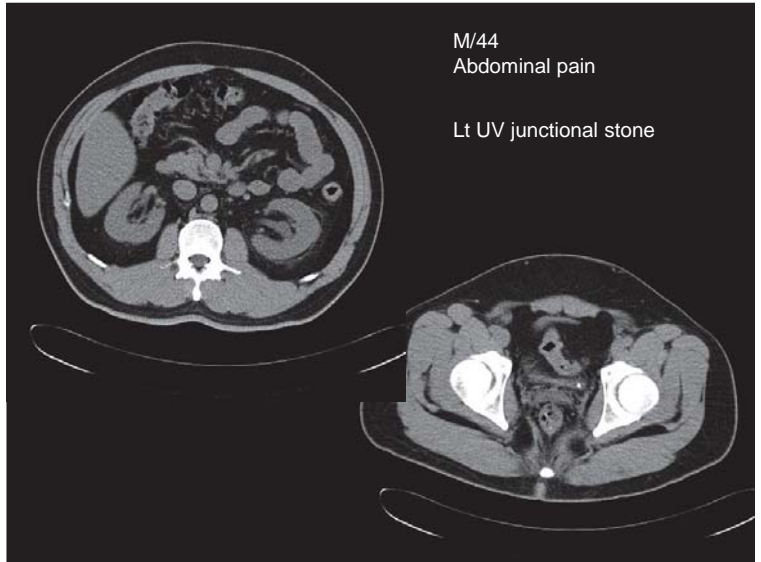
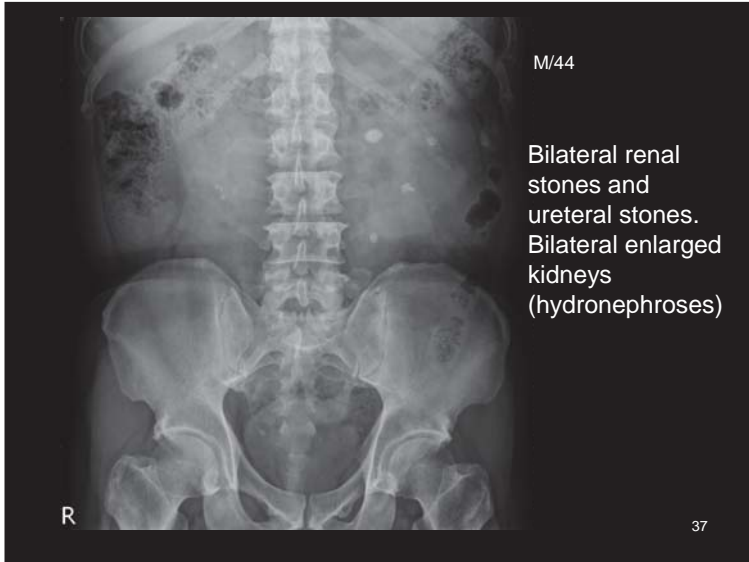
35



M/40.
KUB (2015-09-28)

Bil renal calculi
& Lt ureteral
calculi

36





F/88.
KUB (2015-09-24)

Diverticulosis of
descending &
sigmoid colon
→ Barium retention
or calcifications

45

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Thank you for your attentions!



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