

# 前言

## 肝臟膽囊超音波掃描技術

高雄榮總放射線部  
楊金鳳放射師

- 第一線檢查工具(即時性, 便利性, 非侵襲性)
- 影像品質取決於操作者
- 探頭: 3-5MHZ(成人), 6-8MHZ(小孩)

## 肝臟-掃描技術

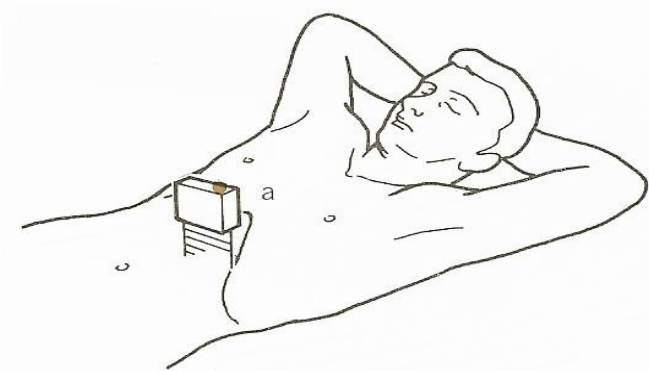
- 熟悉的解剖及臨床知識
- 探頭的掃描方向(橫切, 縱切)
- 探頭的掃描角度(位置高角度大)
- 探頭掃描的位置(肋下, 肋間)
- 病人的吸閉氣及姿勢(向左斜側躺)
- 有系統的掃描方式(principles&protocol)
- 善用儀器功能及熟悉操作
- 耐心
- 多做

## 上腹部超音波-探頭的掃描方式

1. 橫掃描(Transverse scan)
2. 縱掃描(Longitudinal scan, Sagittal scan)
3. 右肋間掃描(Right intercostal scan)
4. 右季肋部斜掃描(Right hypochondria oblique scan)
5. 左肋間掃描(Left intercostal scan)

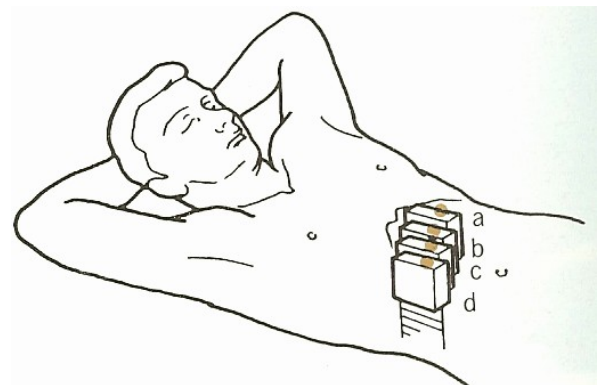
## 探頭的掃描方式

1. 橫掃描(Transverse scan)



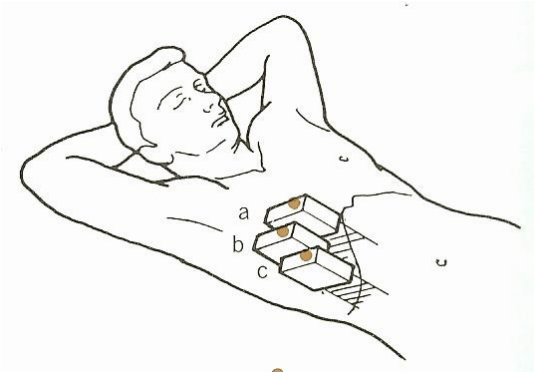
## 探頭的掃描方式

2. 縱掃描(Sagittal scan)



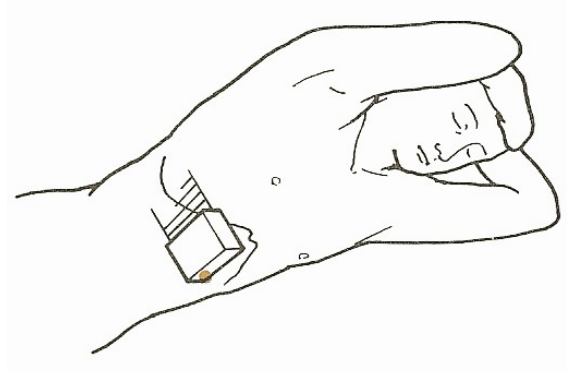
## 探頭的掃描方式

### 3.右肋間掃描(Right intercostal scan)



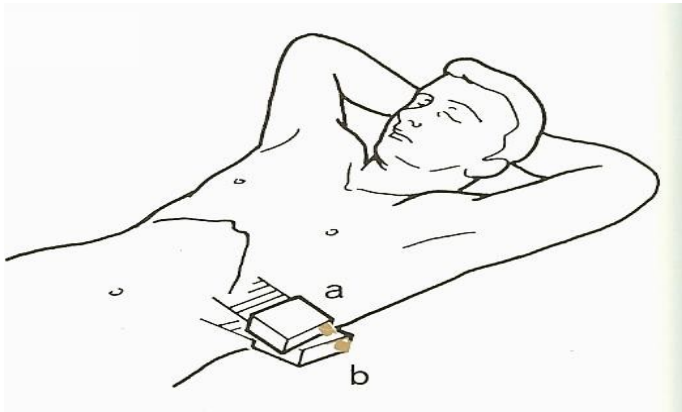
## 探頭的掃描方式

### 4.右季肋部斜掃描(Right oblique scan)

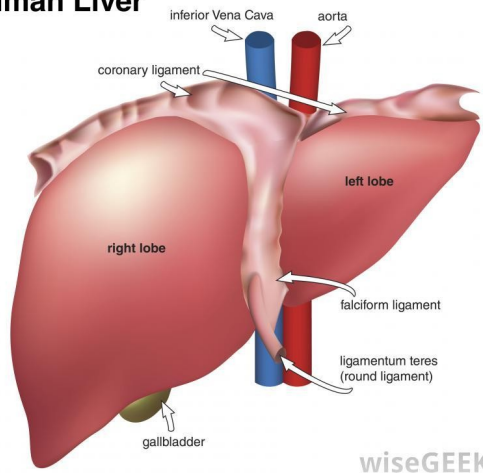


## 探頭的掃描方式

### 5.左肋間掃描(Left intercostal scan)



## Human Liver

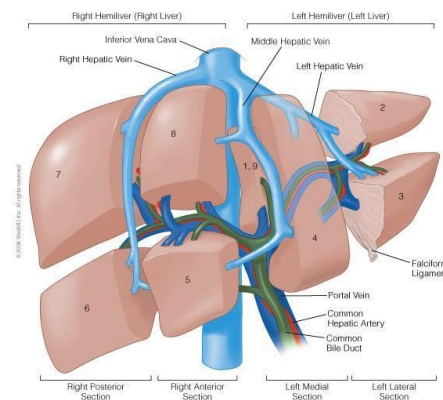
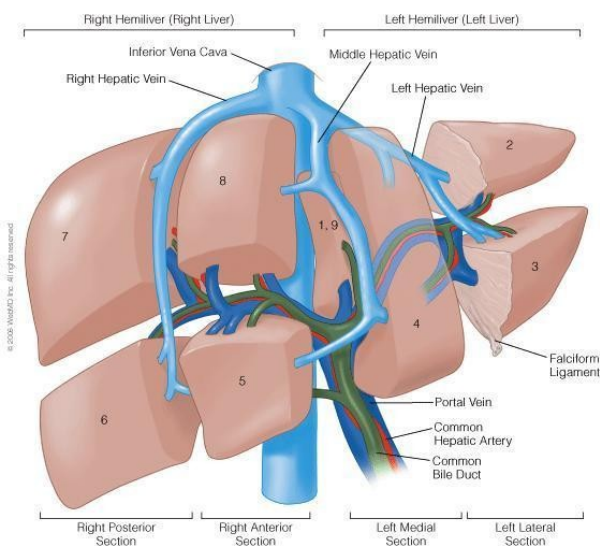


wiseGEEK

<https://hubpages.com/health/The-Pathology-of-the-liver>

## 肝臟的分葉(segment of liver)

- 依順時鐘方向
- 尾葉(S1)
- 四方葉(S4)
- 左葉(S2,S3)
  - 外上(S2)
  - 內下(S3)
- 右葉(S5-S8)
  - 前上(S8),前下(S5)
  - 後上(S7),後下(S6)

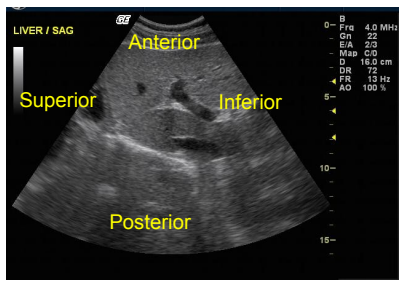
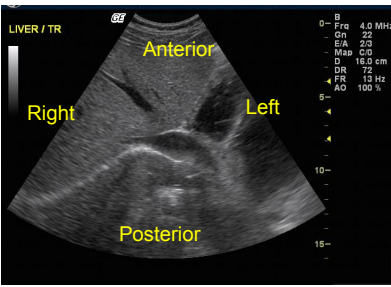


<http://archive.colorectalcanadacancer.com/en/treating-cancer/treatment-cancer/>

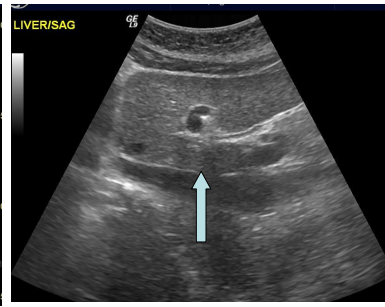
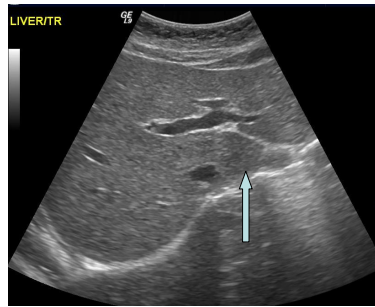
<http://archive.colorectalcanadacancer.com/en/treating-cancer/treatment-cancer/>

# 影像判讀的概念

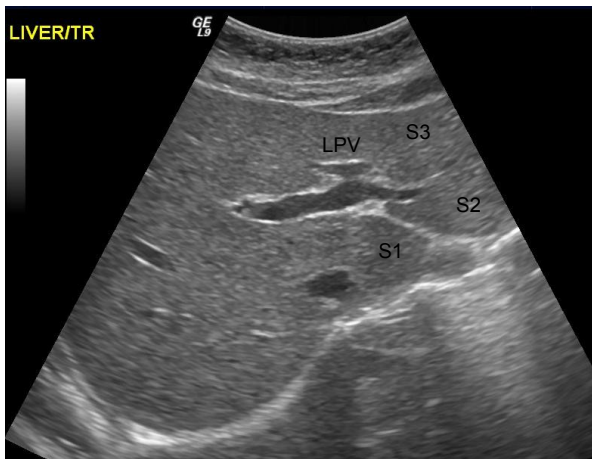
- TRV.(AXIAL IMAGE)
- SAG.(LONGITUDINAL IMAGE)



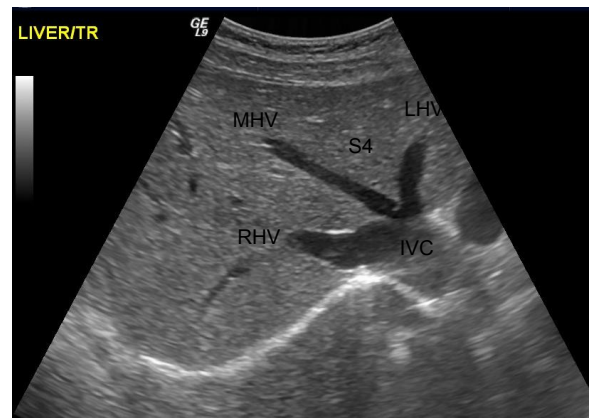
# S1(Caudate lobe尾葉)



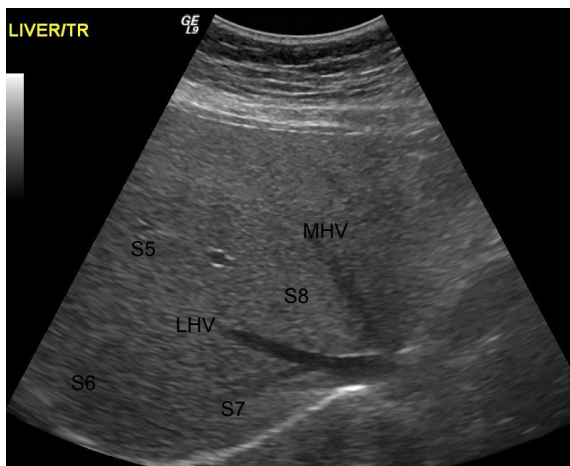
# S2,S3(Lateral segment)



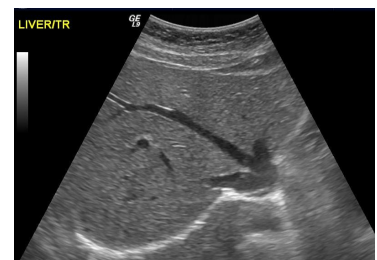
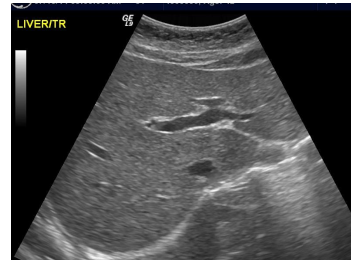
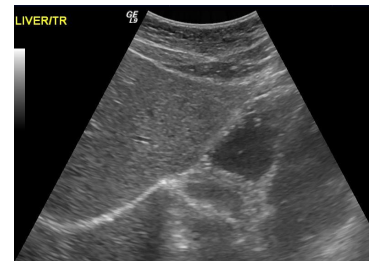
# S4(Quadrangle lobe四方葉)

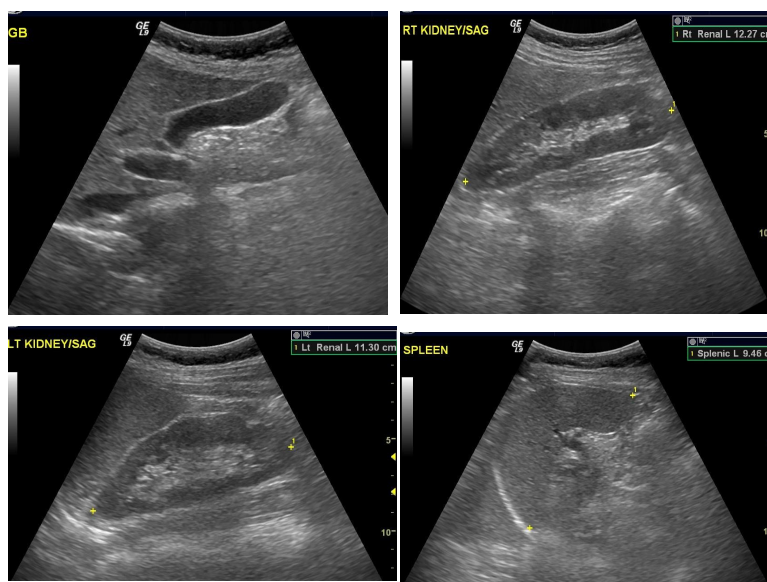
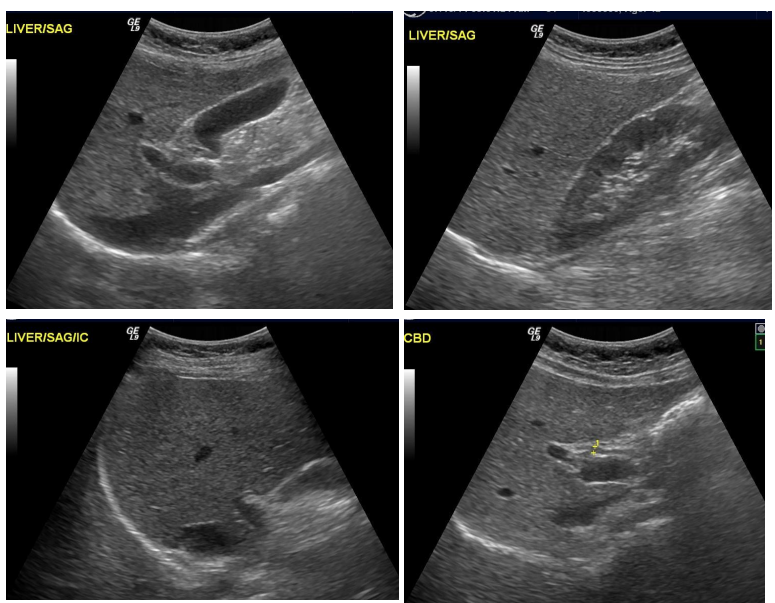
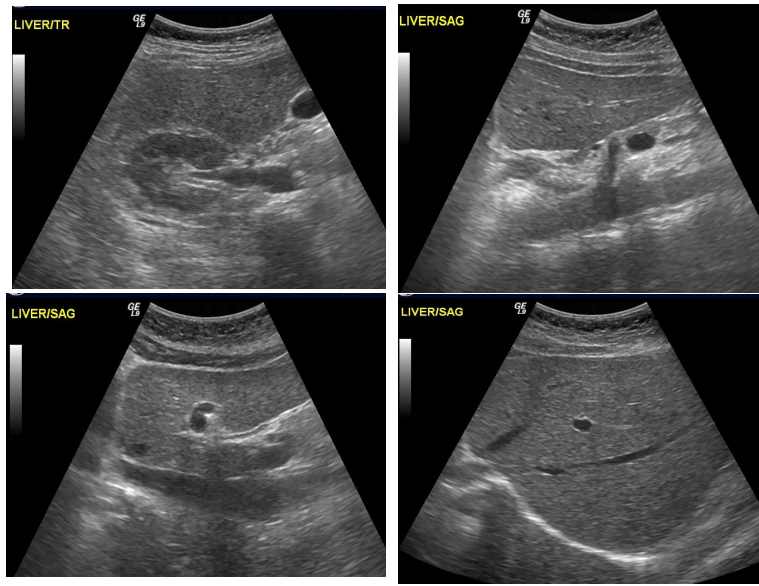
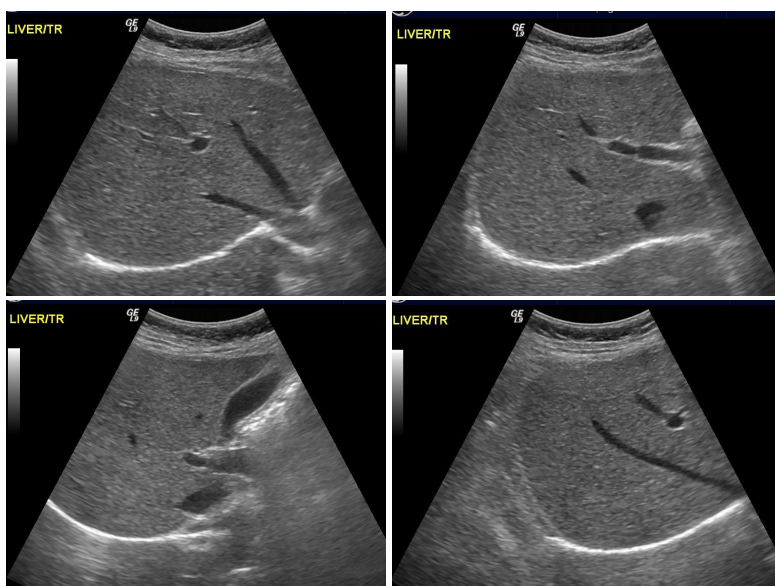


# 右葉(S5-S8)



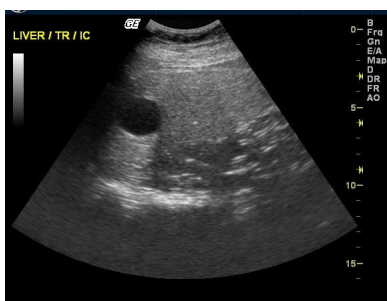
# Upper abdominal Protocols





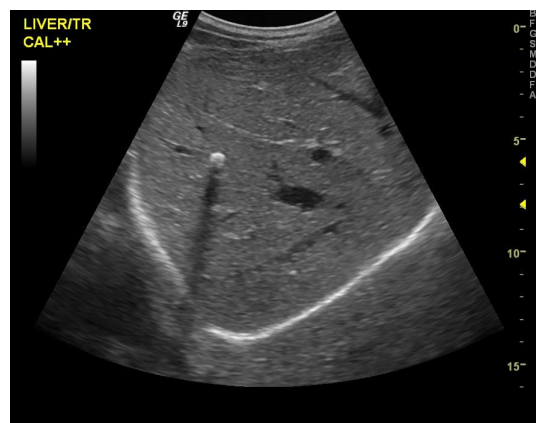
## Hepatic cyst(水囊)

- 內無回音(free echo)
- 清楚的包囊
- 後方回音增強(posterior enhancement)



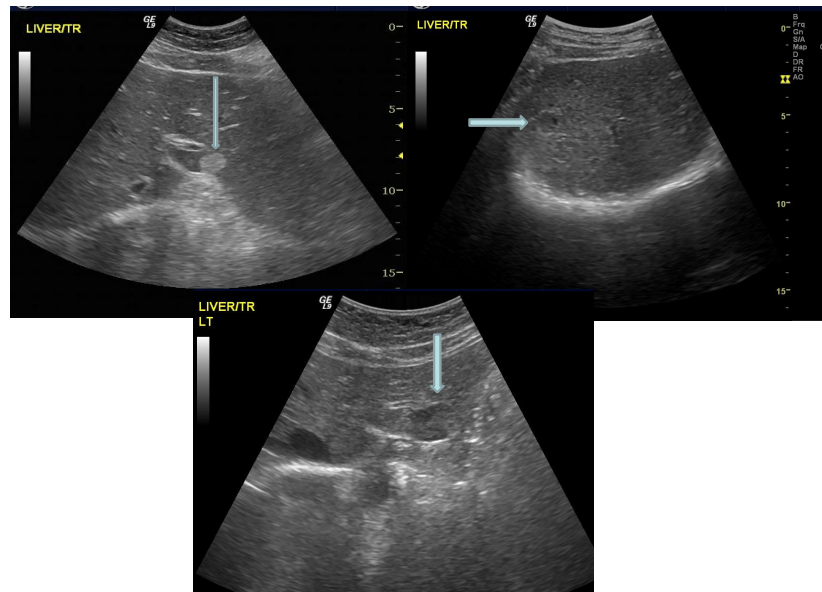
## Hepatic calcification(鈣化)

- 通常是膿瘍,血腫或肉芽腫的末期表現
- 高回音(hyper echo)
- 後方有陰影



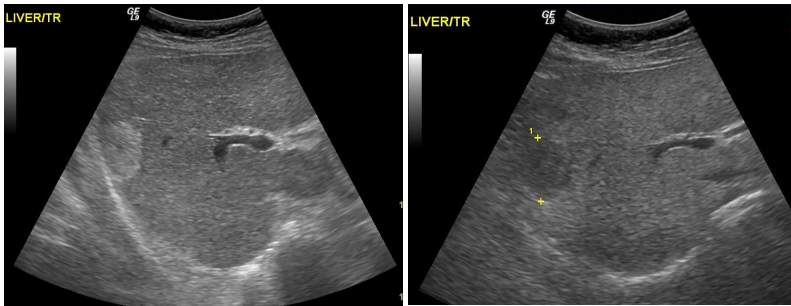
# hemangioma(血管瘤)

- 影像表現多變
- 輕度的後方回音增強
- 與其他腫瘤難區分
- 因流速慢doppler難測得訊號

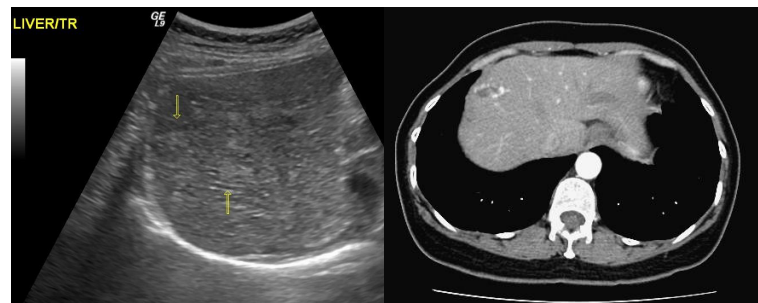


• 2013 6/24

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## A liver hemangioma proved by CT

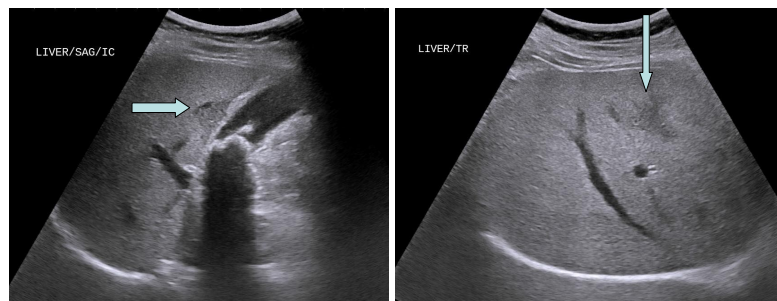
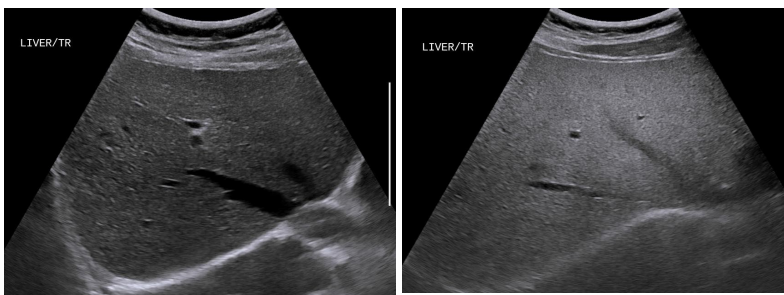


# Fatty liver(脂肪肝)

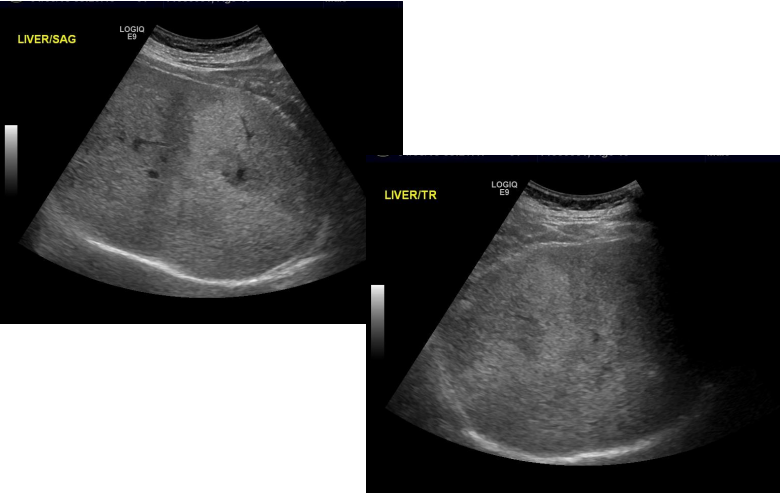
- 局部或廣泛性
- 較正常肝回音高
- 與濫用酒精,肥胖,糖尿病,肝臟代謝疾病有關
- 常合併肝腫大

## Focal fatty sparing/Focal fatty change

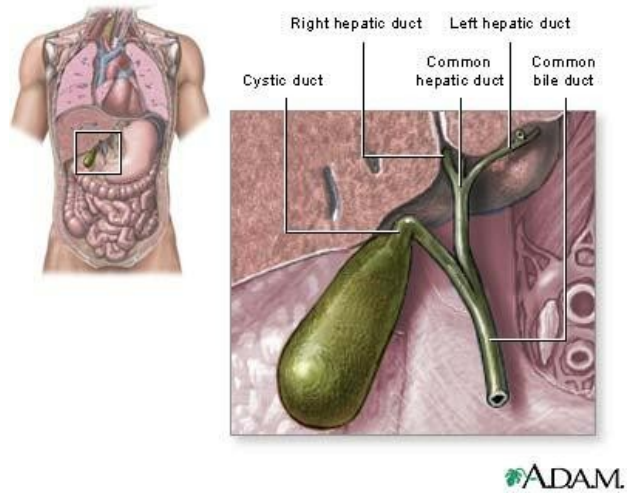
- 未受脂肪浸潤的正常區塊
- 形狀多變可多處
- 沒有腫瘤效應(mass effect)
- 血管走向正常



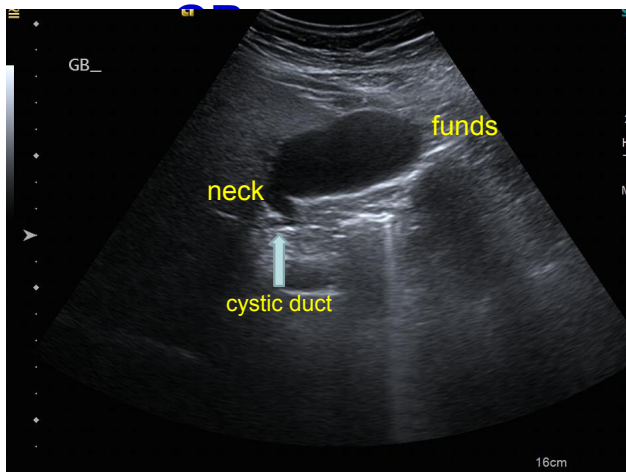
# Uneven Fatty



# GB

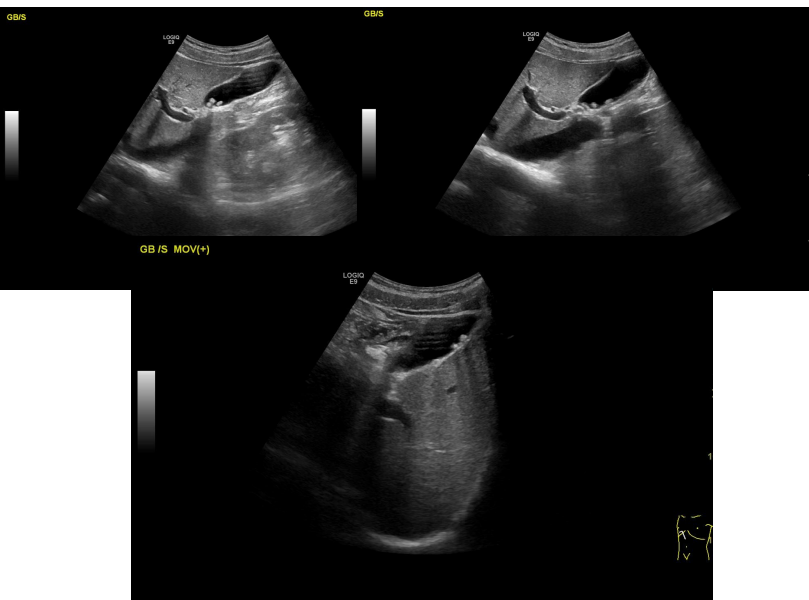
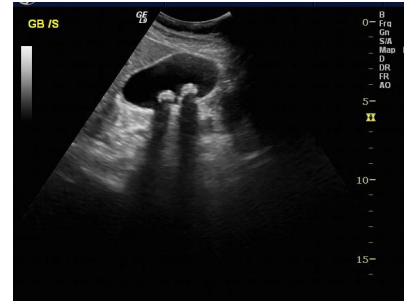


# Normal

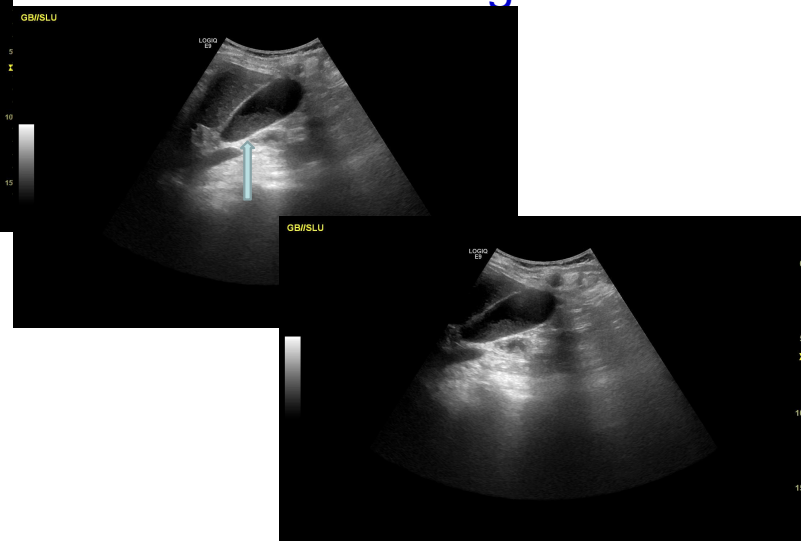


# GB

- 高回音(hyper-SONES)
- 後方有陰影(shadow)
- 可隨姿勢改變而移動

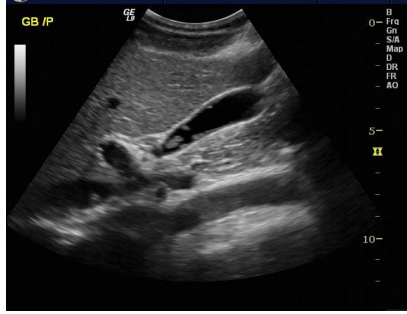


# GB Sludge



## 膽息肉GB

- 高回音(**hypercho**)後方無陰影
- 不會移動(除非有一根常常的莖可輕微的移動)
- 大於1cm 建議切除



## CBD

