

GP Refresher

FOCUS ON THE ABNORMAL ULTRASOUND OF THE LIVER OR PANCREAS



Introduction: Abdominal ultrasound is a cheap, safe investigation and is increasingly being undertaken by primary care to assess a wide range of problems including abdominal pain and abnormal blood tests. However, the interpretation of USS findings can be problematic particularly in the setting of suspected liver and pancreatic problems. This is a short guide in how to manage a patient with an abnormal finding on USS involving their liver, pancreas or gallbladder.

USS and the 2WW Referral: Most 2WW referrals from primary care are usually generated by an abnormal USS finding. 40% of all abnormalities detected on USS turn out to be benign disease. However, 60% will be cancers. As Figure 1 shows, the majority of these patients will require further imaging in the form of a CT scan or MRI scan. Usually, cancers of the pancreas, liver or gallbladder are detected late in primary care and all patients the figure below had inoperable disease at the time of presentation

The USS Report: An increasing number of ultrasound scans are undertaken by sonographers using radiology-specific terminology to describe their findings. This terminology can be difficult to interpret when receiving the report in primary care. In addition, phrases such as “cancer needs excluding”, “indeterminate lesion” may also add to the confusion. The next two graphs show a break-down of findings on USS in patients who, after investigation, had a final diagnosis of benign or malignant disease in their liver, gallbladder or pancreas.



Figure 1: Snapshot of 12 months of local MDT referrals by GPs. Three patients died whilst still on the pathway.

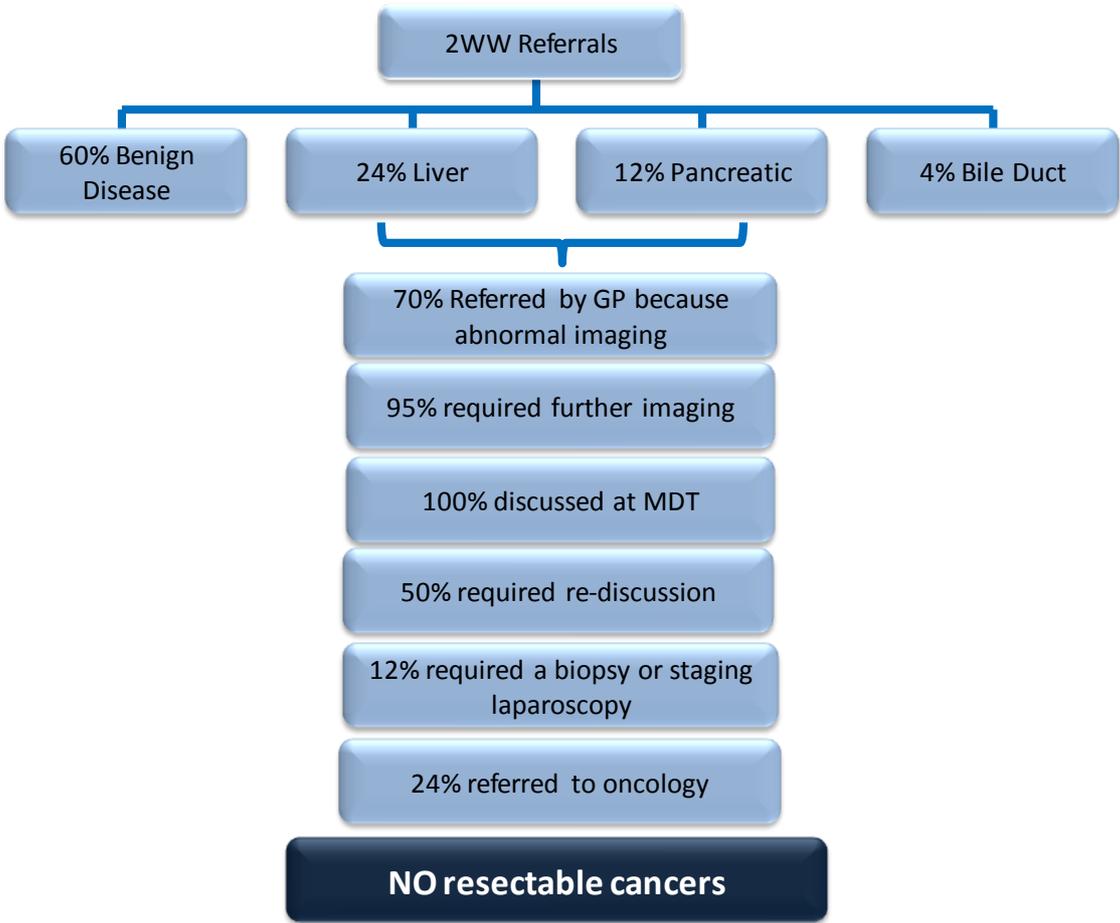


Figure 2: USS Reports in those Patients who ultimately had a Benign Diagnosis

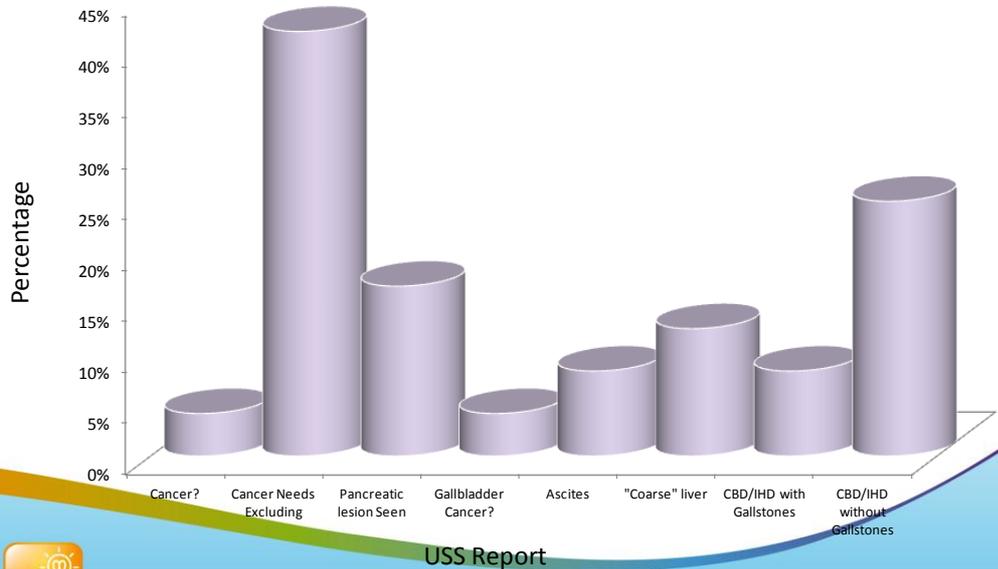
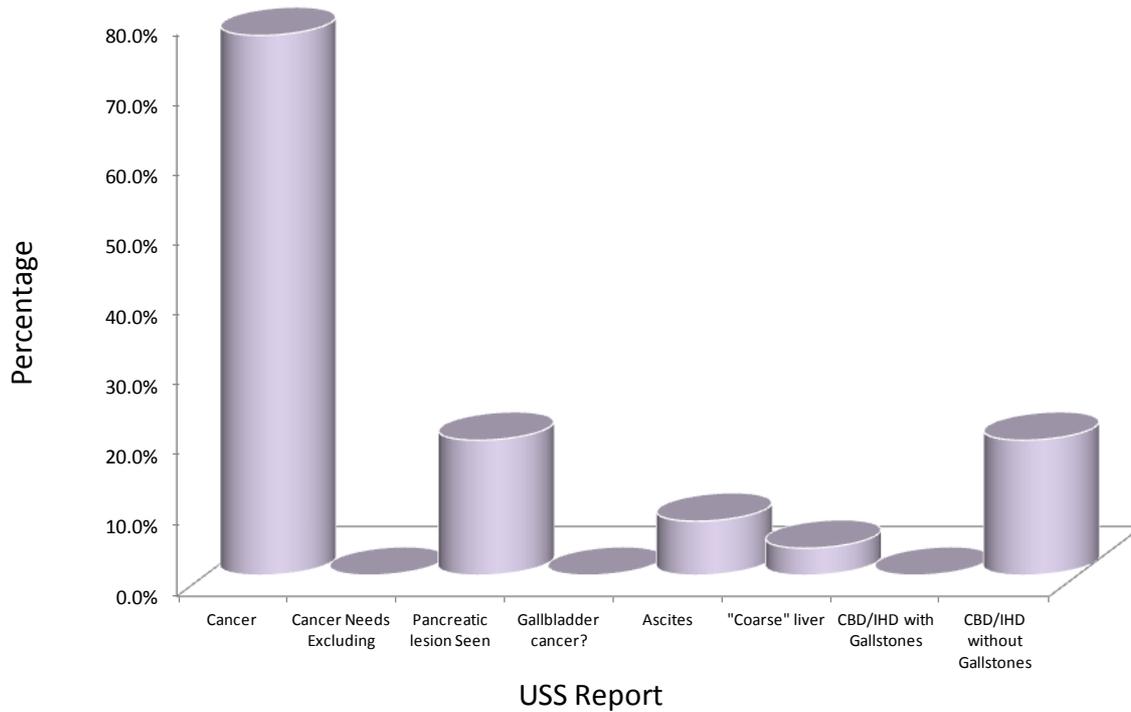


Figure 3: USS Reports in those Patients who ultimately had a Malignant Diagnosis



From this data it can be seen that if the USS can reliably demonstrate lesions within the liver which are likely to be cancer and to a lesser extent mass lesions in the pancreas; but that pick-up rates for other signs associated with hepato-biliary cancers are less reliable

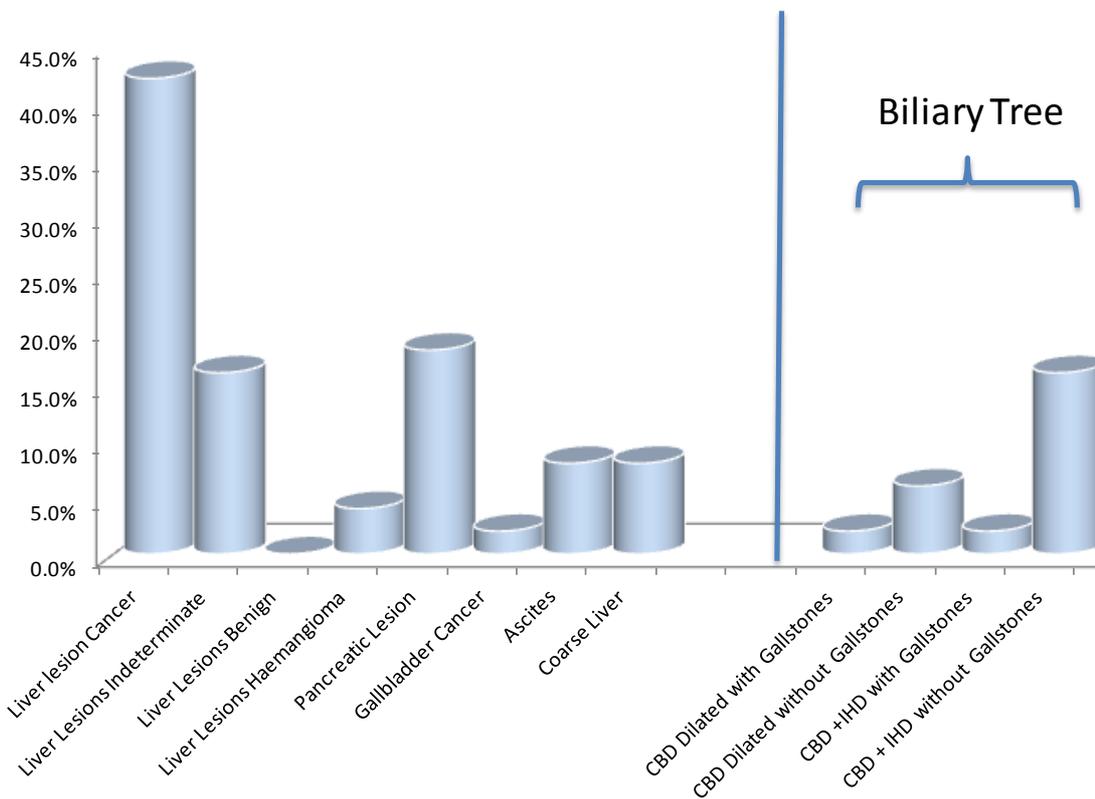
USS findings can be divided up into four main parts:

- Finding of a lesion within liver or pancreas which may be solid or cystic or may be labelled indeterminate, or likely cancer
- Description of the biliary tree e.g. a dilated common bile duct
- Description of the liver parenchyma e.g. a "bright" or "fatty" liver
- Abnormalities within the gallbladder e.g. gallbladder polyp or gallbladder cancer

These findings are shown in Figure 4.



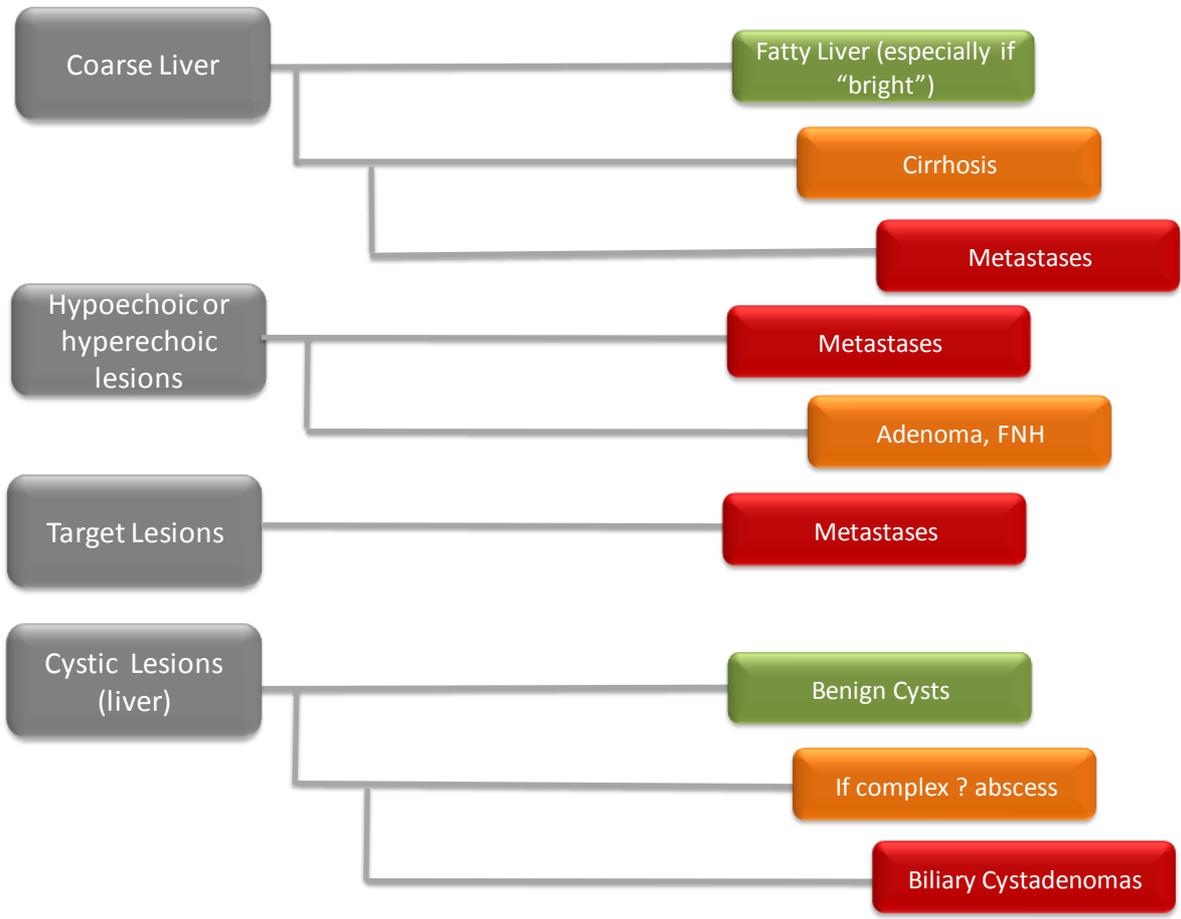
Figure 4: Typical abnormal findings on USS suggestive of HPB disease.



This information can be used to guide further investigations or referral. Figure 4 shows the typical terminology used in USS reporting with the potential differential diagnosis to explain this clinically. Benign disease is demonstrated in green, non-malignant disease which merits referral to HPB surgery or hepatology is demonstrated in orange. Probable malignant disease requiring urgent referral is coloured in red.



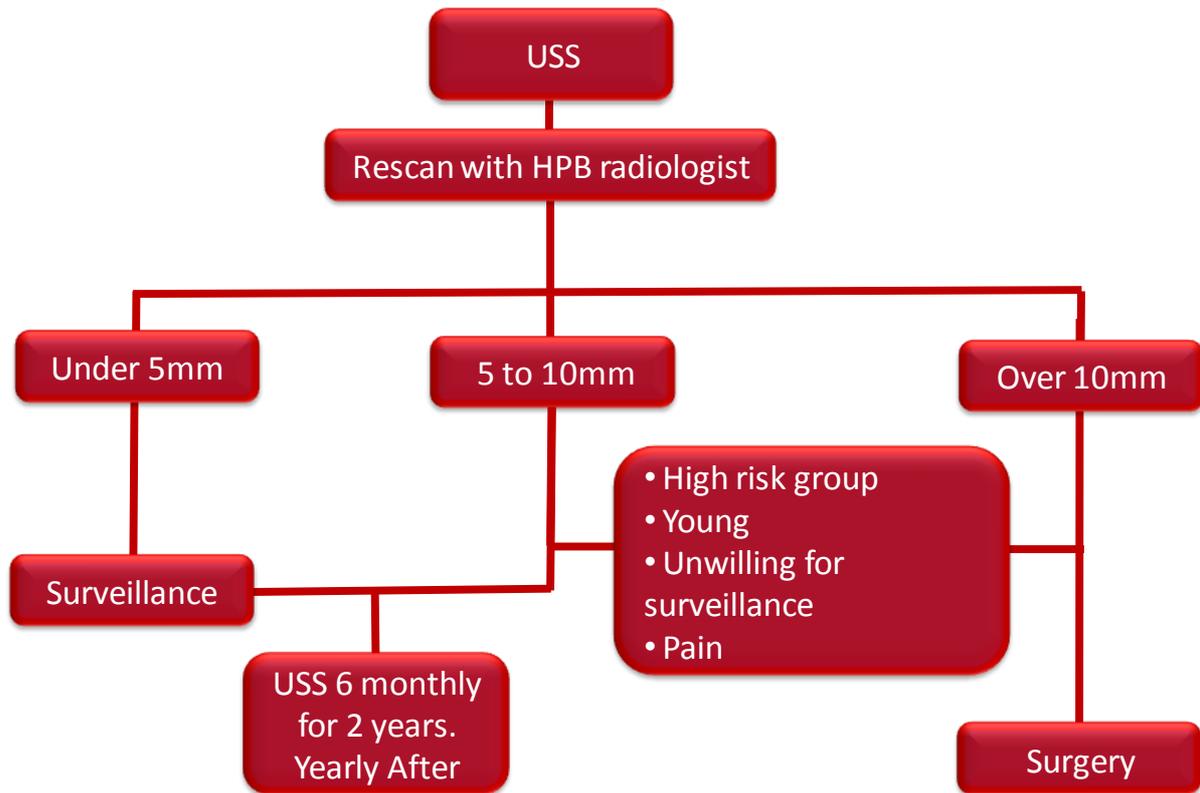
Figure 5: USS Terminology and Differential Diagnosis.



The Gallbladder Polyp: Most gallbladder polyps are cholesterol deposits within the gallbladder wall or turn out to be stones. True gallbladder polyps are linked to increased risk of gallbladder cancer. The causation is not as clearly defined as for colorectal polyps. Malignancy risk correlates to size, in particular polyps over 10mm mandate removal. Management of polyps less than 5mm is not clearly described in the literature, surveillance is a low-risk and cost-effective option in patients willing to undergo surveillance but patient compliance may be an issue. Polyps between 5 to 10mm should probably be under USS surveillance. Figure 6 is a suggested management algorithm for this condition. It would be fair to be point out, however that no clear guidance presently exists.



Figure 6: Surveillance of gallbladder polyps. The repeat scan with an HPB radiologist can be undertaken 6 months after the initial diagnostic scan for polyps less than 10mm.



The Fatty Liver:

Fatty liver and NASH are increasingly common and are frequently reported on ultrasound scans. A fatty liver in a patient with metabolic syndrome and only mildly deranged LFTs will probably have a marginal benefit from routinely seeing hepatology. For these patients life-style advice regarding fat intake and alcohol intake is the main-stay of treatment. A fatty liver with raised ALT needs a viral screen and autoimmune screen. With any features of cirrhosis, the patient will need referring to hepatology.

When to Refer a Patient: By taking all these factors into account, it is possible to arrange some guidelines regarding when to refer a patient and what pathway they should be on e.g. 2WW or urgent or routine referral when encountering an abnormal USS report.



Figure 7: Referral Guidelines for Abnormal Findings on Liver USS (parenchyma or solid lesion detected)

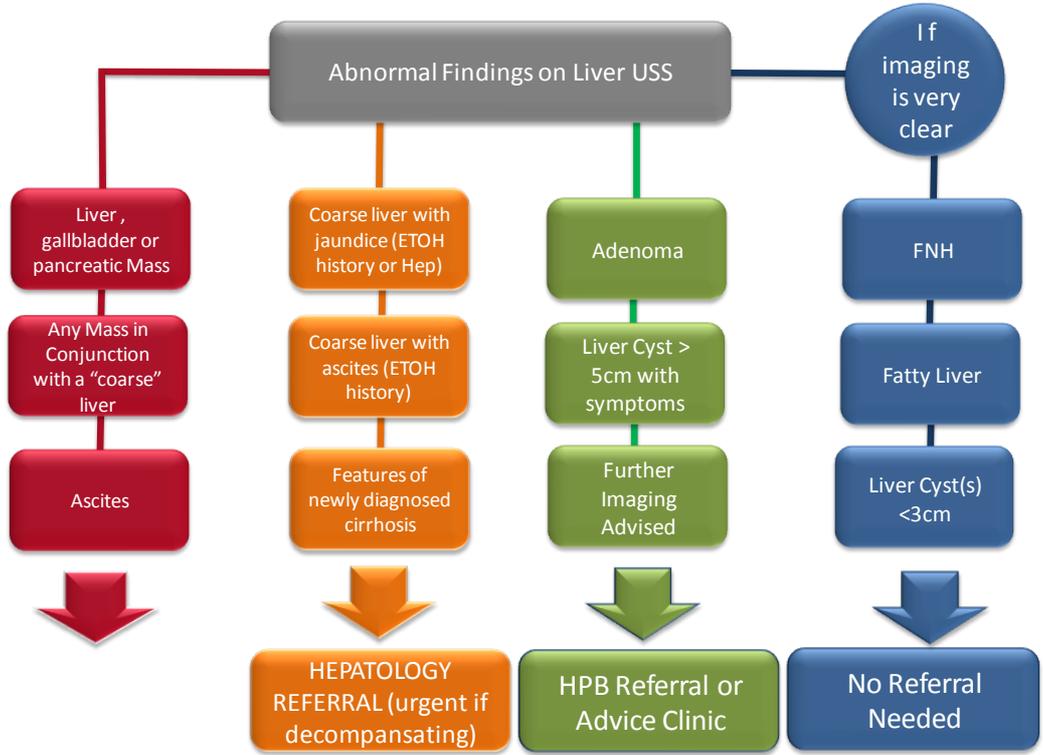
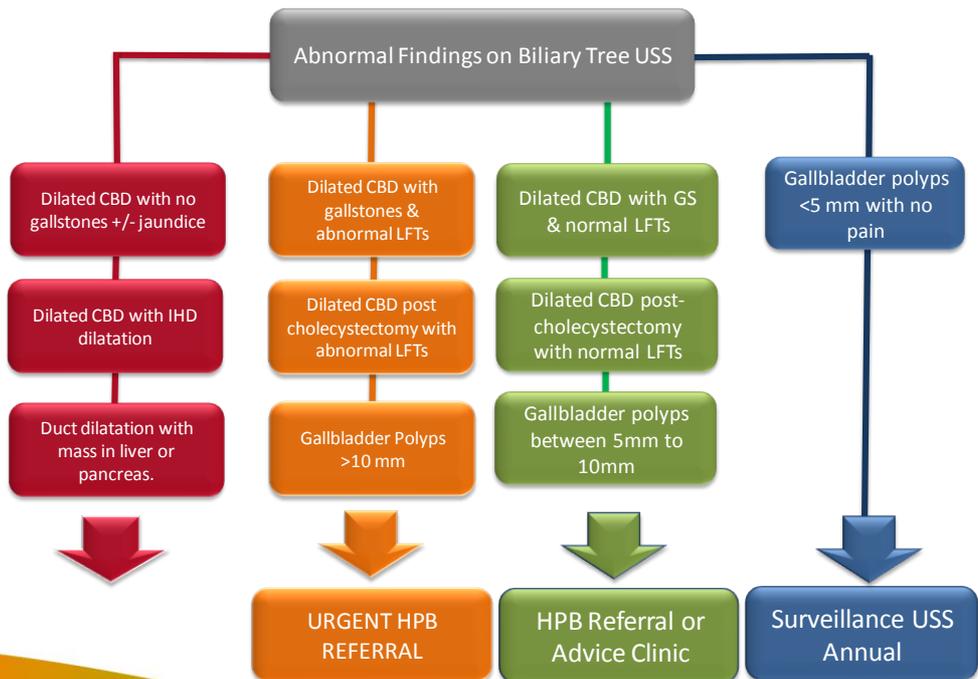
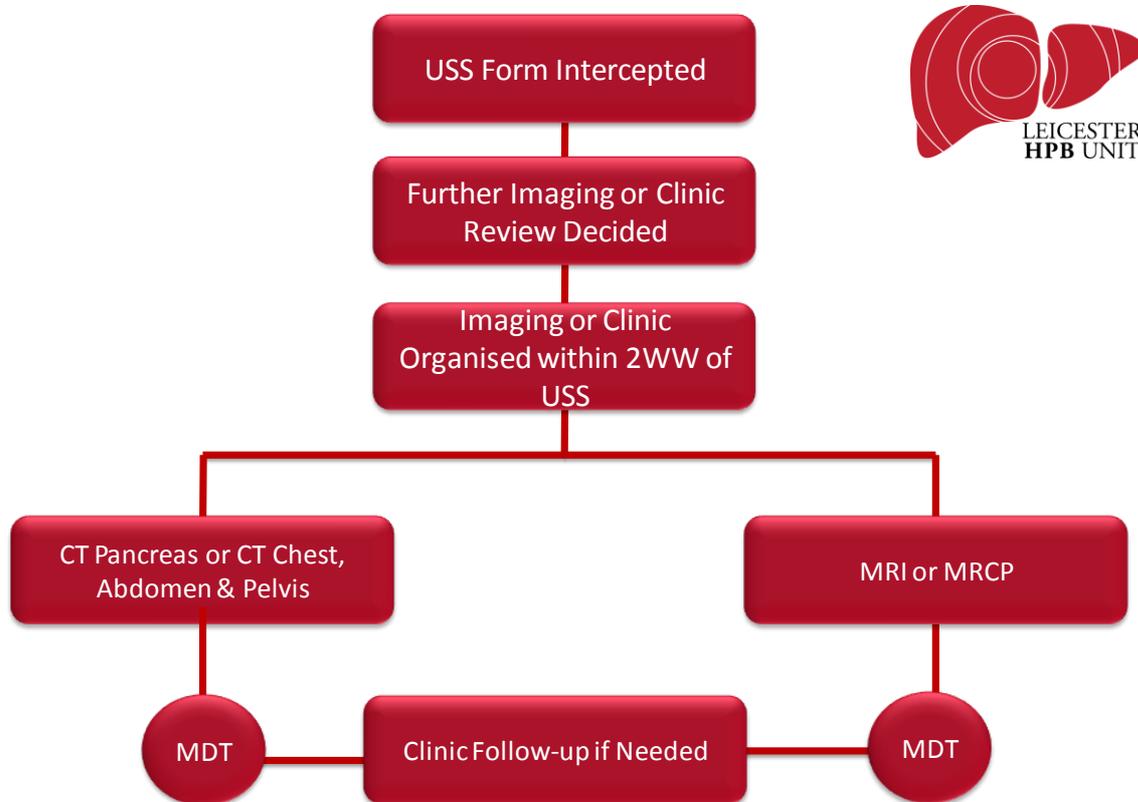


Figure 8: Referral Guidelines for Abnormal Findings on Liver Biliary Tree



The HPB “Intercept” Pathway: Due to the high number of 2WW referrals generated by abnormal HPB imaging; the HPB unit has set up an “intercept” pathway to ensure speedy investigations as soon as an USS report is labelled with the moniker “Referral to HPB MDT is advised”. This pathway has been highly successful in ensuring that the unit meets its 62 day cancer target and is highlighted below. Please be aware that only USS reports with the electronic tag “Referral to HPB MDT is advised” will be picked up and for that reason if you do have a suspicious USS result which merits a 2WW referral, please proceed along this route.

Figure 9: The HPB Intercept Pathway



Choose and Book Advice Clinic: For any other queries please be aware that HPB have a choose and book advice clinic for further feedback and advice. This can be accessed under HEPATOBIILIARY AND PANCREATIC SPECIALISED SURGERY-H&P-LGH-RWE

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Visit HPBLeicester.com for further information about the team.

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