This document is generated by EQA Lite, additions to it are in italics, blue text is post EQA committee meeting consensus after 2 committee members individually reviewed each case (with access to the text box).

93 responses (124 members 75% response rate) consensus (for 80%) 74.4, accept 74.

UK National Liver Histopathology EQA Scheme

Circulation LY

Case Response Analysis

This document gives information on individual cases in circulation LY of this scheme. It contains no personal details of participants.

Case Number: LY1

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Male 45. Abnormal liver function test: Alkaline phosphaase 327; gamm a GT 249; minimal elevation of ALT; Viral screen negative; autoantibodies negative; patient has stage 3 sarcoidosis

Specimen: Liver biopsy

Macroscopic: 2 core of liver combined length 22mm

Immunohistochemistry: masson trichrome

Original Diagnosis: granulomatous inflammation in keeping with sarcoidosis; some fibrosis associated with he granulomas

Tumour:	Popularity:
- No tumour/lesion present	98.9%
Other (please specify in Comments)	1.1%

Tumour 1:	Tumour 2:	Count:
- No tumour/lesion present		79
- No tumour/lesion present	- No tumour/lesion present	13
Other (please specify in Comments)		1

Pattern:	Popularity:
granulomatous	94.6%
Other (please specify in Comments)	5.4%
chronic biliary disease	4.3%
steatosis	4.3%
steatohepatitis	1.1%
not applicable	1.1%
within normal limits	1.1%
lobular hepatitis	1.1%

Pattern 1:	Pattern 2:	Count:
granulomatous		73
granulomatous	chronic biliary disease	4
granulomatous	Other (please specify in Comments)	4
granulomatous	steatosis	4
granulomatous	granulomatous	2
granulomatous	not applicable	1
lobular hepatitis		1
Other (please specify in Comments)		1
steatohepatitis		1
within normal limits		1
		1

Stages:	Popularity:
mild/early fibrosis without bridging	39.8%
fibrosis with bridging between vascular structures	30.1%
Other (please specify in Comments)	21.5%
no fibrosis/equivocal fibrosis	4.3%
not applicable / no special stains to assess architecture	2.2%
advanced fibrosis with bridging and nodularity/cirrhosis	1.1%
hepatocyte loss or bridging - favour collapse not fibrosis	1.1%

Diagnostic categories:	Popularity:
sarcoidosis	91.4%
granulomatous disease NOS (please specify in comments box)	10.8%
Other (please enter alternative diagnosis in comments box)	2.2%
chronic cholangiopathy NOS	1.1%
fatty liver disease - alcohol related liver disease	1.1%
primary sclerosing cholangitis	1.1%
manifestation of systemic or extrahepatic disease (please specify in comments box)	1.1%

Diagnosis Combination:	Count:
sarcoidosis	77
granulomatous disease NOS (please specify in comments box)	7
granulomatous disease NOS (please specify in comments box), sarcoidosis	3
Other (please enter alternative diagnosis in comments box), sarcoidosis	2
chronic cholangiopathy NOS, sarcoidosis	1
fatty liver disease - alcohol related liver disease, sarcoidosis	1
manifestation of systemic or extrahepatic disease (please specify in comments box)	1
primary sclerosing cholangitis, sarcoidosis	1

Original report and further information (if any): granulomatous inflammation in keeping with sarcoidosis; some fibrosis associated with the granulomas

Collator summary(second collator gave comments at meeting):

Pattern:
Consensus for:
granulomatous pattern alone (76) +1 'other' and 1 no dropdown choices but text given.
Some suggest a second pattern but say it's secondary, was a small amount of fat.

?Lose 5 for 'lobular hepatitis' 'within normal limits' as only pattern selected – probably not, agreed (not to lose points) do have more details in text and/or diagnosis section
*?Lose 5 for steatohepatitis pattern (don't describe granulomas, do include sarcoid in diagnosis)**
?Lose 5 for suggesting a second pattern potentially suggesting a second disease (rather than changes secondary to the granulomas) not to lose points

Stage – did have MT. most felt bridging or less, would have to interpret 'other' text to reach consensus and therefore suggest not to score. *Committee felt not to score and not appropriate to combine bridging with mild*

Diagnosis – consensus for sarcoidosis alone (77) + 'NOS' or 'other' or systemic disease included =13

? Lose points for suggesting a second disease either PSC or FLD ArLD? Weren't offered any history of alcohol. response including PSC in diagnosis not to be scored down.*

Meeting comments:

- *Response which doesn't mention granulomas, has pattern as steatohepatitis only and makes fatty liver disease diagnosis (as well as sarcoid) should lose 5* all other responses 10.*

EQA lite For 10 marks granulomatous pattern and sarcoidosis as only or favoured diagnosis

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Case Number: LY2

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Male 20. IBD, deranged LFTs, no large duct PSC on imaging. Raised IgG, positive LCA, ? AIH/small duct PSC

Specimen: liver biopsy

Macroscopic: liver biopsy - one core 30mm long

Immunohistochemistry: Orcein, CK7, van gieson, DPAS, reticulin

Original Diagnosis: small duct PSC, not features of overlap with AIH

Tumour:	Popularity:
- No tumour/lesion present	98.9%
Other (please specify in Comments)	1.1%

Tumour 1:	Tumour 2:	Count:
- No tumour/lesion present		82
- No tumour/lesion present	- No tumour/lesion present	10
Other (please specify in Comments)		1

Pattern:	Popularity:
chronic biliary disease	95.7%
Other (please specify in Comments)	2.2%
cholestasis, bilirubinostasis	2.2%
steatosis	1.1%
lobular hepatitis	1.1%

Pattern 1:	Pattern 2:	Count:
chronic biliary disease		85
		2
Other (please specify in Comments)		1
chronic biliary disease	cholestasis, bilirubinostasis	1
lobular hepatitis	cholestasis, bilirubinostasis	1
chronic biliary disease	chronic biliary disease	1
chronic biliary disease	Other (please specify in Comments)	1
chronic biliary disease	steatosis	1

Stages:	Popularity:
mild/early fibrosis without bridging	58.1%
fibrosis with bridging between vascular structures	37.6%
Other (please specify in Comments)	2.2%
no fibrosis/equivocal fibrosis	2.2%

Diagnostic categories:	Popularity:
primary sclerosing cholangitis	96.8%
chronic cholangiopathy NOS	2.2%
autoimmune hepatitis	1.1%

Diagnosis Combination:	Count:
primary sclerosing cholangitis	90
chronic cholangiopathy NOS	2
autoimmune hepatitis	1

Original report and further information (if any): small duct PSC, not features of overlap with AIH

Collator 1 summary:

Consensus for:
Patten: chronic biliary disease (95.7%)

Lose 5 points for AIH
Lose 5 points for not mentioning biliary disease

Fibrosis: mild/early fibrosis without bridging (58%) and fibrosis with bridging between vascular structures (37%)

?? Lose points for not mentioning any fibrosis (although 2 mention it in the comments)

Diagnosis: Good consensus for PSC (96.8%)

Collator 2 summary:

Pattern: consensus for chronic biliary disease alone from dropdown (87) +3 either no response or other.

Can't really see fat or bile stasis but not to score down? agreed

?lose 5 for not selecting 'chronic biliary disease' (makes diagnosis AIH likely to lose points below).

Stage: consensus for some stage of fibrosis, bridging or mild?

?Lose 5 for no /equivocal fibrosis, probably not committee thinks not, not to score for stage

Diagnosis: consensus for PSC

?Lose 10 for AIH agreed by committee, all other responses score 10

EQA lite For 10 marks biliary pattern and diagnosis of PSC. Response without chronic biliary disease pattern and diagnosis of AIH score 0.

Case Number: LY3

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Female 29. Multiple hepatic adenomas, one >6cm in size.

Specimen: Liver resection

Macroscopic: Liver wedge measuring 38 x 25 x 18mm. Cut surface has a mottled and haemorrhagic cut surface.

Immunohistochemistry: none

Original Diagnosis: Inflammatory hepatocellular adenoma.

Tumour:	Popularity:
hepatocellular adenoma inflammatory	76.3%
hepatocellular adenoma NOS	19.4%
hepatocellular adenoma HNFalpha1 inactivated	5.4%
Other (please specify in Comments)	2.2%
biliary hamartoma / von Meyenberg complex	1.1%

Tumour 1:	Tumour 2:	Count:
hepatocellular adenoma inflammatory		66
hepatocellular adenoma NOS		16
hepatocellular adenoma HNFalpha1 inactivated		5
hepatocellular adenoma inflammatory	hepatocellular adenoma NOS	2
hepatocellular adenoma inflammatory	Other (please specify in Comments)	2
biliary hamartoma / von Meyenberg complex		1
hepatocellular adenoma inflammatory	hepatocellular adenoma inflammatory	1

Pattern:	Popularity:
not applicable	51.6%
within normal limits	15.1%
Other (please specify in Comments)	6.5%
steatosis	5.4%
steatohepatitis	1.1%

Pattern 1:	Pattern 2:	Count:
not applicable		47
		21
within normal limits		13
steatosis		5
Other (please specify in Comments)		4
not applicable	Other (please specify in Comments)	1
within normal limits	Other (please specify in Comments)	1
steatohepatitis	steatohepatitis	1

Stages:	Popularity:
not applicable / no special stains to assess architecture	64.5%
no fibrosis/equivocal fibrosis	8.6%
mild/early fibrosis without bridging	1.1%

Diagnostic categories:	Popularity:
- not applicable (insufficient non-lesional tissue)	21.5%
- no evidence of diffuse/background liver disease	12.9%
fatty liver disease - non-alcohol related fatty liver disease	2.2%
Other (please enter alternative diagnosis in comments box)	1.1%
- histologically indeterminate for cause	1.1%

Diagnosis Combination:	Count:

[No selections made]	57
- not applicable (insufficient non-lesional tissue)	20
- no evidence of diffuse/background liver disease	12
fatty liver disease - non-alcohol related fatty liver disease	2
- histologically indeterminate for cause	1
Other (please enter alternative diagnosis in comments box)	1

Original report and further information (if any): Inflammatory hepatocellular adenoma.

Collator 1 summary: Tumour: hepatocellular adenoma inflammatory alone (76%) + hepatocellular adenoma NOS (19%) = >80% + hepatocellular HNF-1 inactivated = >85%

Lose 10 marks for Biliary hamartoma/Von Meyenberg complex

? Lose 5 for marks for background steatohepatitis (but not for steatosis ?)

Collator 2 summary:

Inflammatory HCA alone 71, if add NOS 87

?Lose 5 for HNF1a inactivated – probably not weren't given extra stains committee agree don't lose points

?Lose 10 von meyenberg complex committee agree, all other responses score 10

Only a small amount of background liver no consensus for pattern or diagnosis.

EQA lite For 10 marks hepatocellular adenoma. Von Meyenberg complex score 0. Original diagnosis = inflammatory adenoma – this was the diagnosis of 76% responders – not sufficient consensus for scoring on adenoma type.

Case Number: LY4

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Female 58. acute hepatitis, ? cause. Recent Pfizer vaccine.

Specimen: biopsy

Macroscopic: 30mm tan core bisected

Immunohistochemistry: orcein

Original Diagnosis: acute hepatitis, drug viral or acute presentation AIH possibilities

Tumour:	**Popularity:**
- No tumour/lesion present	97.8%
Other (please specify in Comments)	1.1%

Tumour 1:	**Tumour 2:**	**Count:**
- No tumour/lesion present		84
- No tumour/lesion present	- No tumour/lesion present	7
		1
Other (please specify in Comments)		1

Pattern:	Popularity:
lobular hepatitis	83.9%
chronic hepatitis	11.8%
Other (please specify in Comments)	9.7%
granulomatous	9.7%
cholestasis, bilirubinostasis	4.3%
not applicable	1.1%
within normal limits	1.1%
chronic biliary disease	1.1%
abnormal, no pattern discernible	1.1%

Pattern 1:	Pattern 2:	Count:
lobular hepatitis		58
lobular hepatitis	granulomatous	7
Other (please specify in Comments)		4
chronic hepatitis		4
lobular hepatitis	chronic hepatitis	4
lobular hepatitis	cholestasis, bilirubinostasis	3
lobular hepatitis	Other (please specify in Comments)	2
Other (please specify in Comments)	Other (please specify in Comments)	1
chronic hepatitis	lobular hepatitis	1
granulomatous	lobular hepatitis	1
lobular hepatitis	lobular hepatitis	1
lobular hepatitis	not applicable	1
cholestasis, bilirubinostasis	Other (please specify in Comments)	1
chronic hepatitis	Other (please specify in Comments)	1
chronic hepatitis	granulomatous	1
within normal limits		1
abnormal, no pattern discernible		1
chronic biliary disease		1

Stages:	Popularity:
no fibrosis/equivocal fibrosis	37.6%
not applicable / no special stains to assess architecture	26.9%
hepatocyte loss or bridging - favour collapse not fibrosis	18.3%
mild/early fibrosis without bridging	7.5%
fibrosis with bridging between vascular structures	7.5%

Diagnostic categories:	Popularity:
acute / subacute hepatitis - autoimmune / drug / viral	73.1%
drug induced liver injury (please specify in comments box)	22.6%
autoimmune hepatitis	6.5%
granulomatous disease NOS (please specify in comments box)	3.2%
- histologically indeterminate for cause	3.2%

Diagnosis Combination:	Count:
acute / subacute hepatitis - autoimmune / drug / viral	62
drug induced liver injury (please specify in comments box)	16
autoimmune hepatitis	5
acute / subacute hepatitis - autoimmune / drug / viral, drug induced liver injury (please specify in comments box)	4
- histologically indeterminate for cause	2
acute / subacute hepatitis - autoimmune / drug / viral, granulomatous disease NOS (please specify in comments box)	2
- histologically indeterminate for cause, granulomatous disease NOS (please specify in comments box)	1
autoimmune hepatitis, drug induced liver injury (please specify in comments box)	1

Original report and further information (if any): acute hepatitis, drug viral or acute presentation AIH possibilities

Original report and further information (if any): acute hepatitis, drug viral or acute presentation AIH possibilities

Collator summary (second collator gave comments at meeting) - looking forward to be educated about this one – potential role of Pfizer vaccine.

Pattern *– lobular hepatitis – if acceptable to combine with granulomatous or cholestasis, then 73 have this – not quite consensus. If include 'other' where acute/subacute hepatitis is the diagnosis, then this goes up to 78, reaching consensus for lobular hepatitis.*

? how to score 'chronic hepatitis' pattern where the diagnosis is 'acute/subacute hepatitis' and no comments to indicate the presence of an acute hepatitis element – probably need to ask the audience about this.

'within normal limits' should lose marks even though the diagnosis is 'acute/subacute hepatitis'

Chronic hepatitis – if not also acute/subacute or lobular hepatitis – probably lose points. Most will lose points based on fibrosis and AIH diagnosis.

Stage*: 7 have fibrosis with bridging, even though there was only an Orcein stain. So outliers for stage, but probably not scoring on stage due to insufficient connective tissue stains. Can't score committee view*

Diagnosis: *Approaching consensus for acute/subacute hepatitis 68.*

If also accept lobular hepatitis pattern with DILI diagnosis and comment about reaction to Pfizer vaccine (15+2) this gets to 85 and reaches consensus.

Lose marks for diagnosis of AIH if no comment on need for serology etc.

Lobular hepatitis and /or acute/subacute hepatitis is a consensus therefore:

Lose 5:

Chronic hepatitis

Cholangiopathy

Chronic biliary disease

Within normal limits

AIH in isolation lose marks (10)

At members meeting, in the light of subsequent clinical course (has been treated as AIH) agreed that responses with no reference to acute injury i.e. unequivocally chronic response, should score 5 (rather than 0 with ref to the AIH responses)

Eqa lite; for 10 marks acute injury described as lobular hepatitis pattern +/- acute/subacute hepatitis diagnosis. Responses with no reference to acute injury score 5.

Many commented on possible hepatitic response to Pfizer vaccine – often expressed as DILI. On discussion, it seems likely that this can occur. In this case, based on follow up information (high IgG, SMA+, response to steroids) the working diagnosis is AIH.

Rmb check 71 and 244

Case Number: LY5

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Female 56. NASH, cirrhosis?

Specimen: biopsy

Macroscopic: Tan core 26mm bisected

Immunohistochemistry: HVG

Original Diagnosis: Steatohepatitis, marked perivenular inflammation, some centrizonal arteries. Severe fibrosis just short of cirrhosis.

Tumour:	Popularity:
- No tumour/lesion present	98.9%
Other (please specify in Comments)	1.1%

Tumour 1:	Tumour 2:	Count:
- No tumour/lesion present		85
- No tumour/lesion present	- No tumour/lesion present	7
Other (please specify in Comments)		1

Pattern:	Popularity:
steatohepatitis	93.5%
steatosis	12.9%
chronic hepatitis	3.2%
Other (please specify in Comments)	2.2%

Pattern 1:	Pattern 2:	Count:
steatohepatitis		74
steatohepatitis	steatosis	6
steatosis		5
steatohepatitis	chronic hepatitis	3
steatohepatitis	Other (please specify in Comments)	2
steatohepatitis	steatohepatitis	1
steatosis	steatohepatitis	1
		1

Stages:	Popularity:
advanced fibrosis with bridging and nodularity/cirrhosis	62.4%
fibrosis with bridging between vascular structures	36.6%
Other (please specify in Comments)	1.1%

Diagnostic categories:	Popularity:
fatty liver disease - non-alcohol related fatty liver disease	64.5%
fatty liver disease - either alcohol or non-alcohol	38.7%
autoimmune hepatitis	2.2%
Other (please enter alternative diagnosis in comments box)	1.1%

Diagnosis Combination:	Count:
fatty liver disease - non-alcohol related fatty liver disease	55

fatty liver disease - either alcohol or non-alcohol	32
fatty liver disease - either alcohol or non-alcohol, fatty liver disease - non-alcohol related fatty liver disease	3
autoimmune hepatitis, fatty liver disease - non-alcohol related fatty liver disease	2
fatty liver disease - either alcohol or non-alcohol, Other (please enter alternative diagnosis in comments box)	1

Original report and further information (if any): Steatohepatitis, marked perivenular inflammation, some centrizonal arteries. Severe fibrosis just short of cirrhosis.

Collator comments (second collator gave comments at meeting) – consensus for steatohepatitis (82+2) and fatty liver disease non-alcohol (91)

Lose 5 points for steatosis without steatohepatitis – but what about the responses that include ballooning and MDBs in the comments? Should lose 5 (as in previous circulations word 'steatohepatitis' should be used)

Stage – all have bridging fibrosis or advanced fibrosis/cirrhosis – no deductions for stage.

? lose points for chronic hepatitis pattern and AIH diagnosis – both have chronic hepatitis as second pattern and mention the need to correlate with serology in the comments, so I would think these are OK.. One describes 'profuse plasma cells'.

The third with 'chronic hepatitis' in pattern diagnoses fatty liver disease without further mention of chronic hepatitis

*Lose 5 for suggesting a second pattern of injury and/or second diagnosis i.e. AIH as there is a strong consensus for steatohepatitis and FLD **alone**.*

RMB note from members meeting; unequivocal chronic score 5 otherwise score 10

EQA lite: For full marks: pattern must include the word 'steatohepatitis' and diagnosis 'non-alcohol related FLD, alone or +/- alcohol related FLD. (all had this). Stage of bridging or advanced fibrosis (all had this). Lose 5 marks for 'steatosis' without stating steatohepatitis, even if comments mention ballooning, MDBs etc. Lose 5 marks for additional disease pattern of chronic hepatitis – 3 responses, consensus for no additional type of liver disease.

Case Number: LY6

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Female 48. Failed liver graft at 29 years, ? hilar malignancy.

Specimen: Liver explant

Macroscopic: Explanted liver - explanted liver weighing 1576g and measuring 270 x 155 x 105mm. Gallbladder is absent. The capsular surface is haemorrhagic and mottled. Transverse slicing reveals a mottled tan brown cut surface with numerous cystic areas containing pus, the largest area measures 33mm maximum dimension. In the hilar region and extending into the major septae an abnormal area is present which is pale / yellow / cream appearance and appears to surround the hilar and septal structures, at least 60 mm in dimension. Representative sections taken.

Immunohistochemistry: None

Original Diagnosis: well and moderately differentiated intrahepatic cholangiocarcinoma, periductal infiltrating-type, extensively involving hilar, septal and peripheral portal tract structures.

Tumour:	**Popularity:**
cholangiocarcinoma	90.3%
biliary intra-epithelial neoplasia (BilIN)	9.7%
Other (please specify in Comments)	6.5%

- No tumour/lesion present	3.2%
cyst (non-neoplastic)	2.2%
biliary intraductal papillary neoplasia	2.2%
metastasis (further comment in Comments)	1.1%
hepatocellular adenoma NOS	1.1%
combined hepatocellular and cholangiocarcinoma	1.1%
bile duct adenoma / peribiliary gland hamartoma	1.1%

Tumour 1:	Tumour 2:	Count:
cholangiocarcinoma		68
cholangiocarcinoma	biliary intra-epithelial neoplasia (BilIN)	8
cholangiocarcinoma	Other (please specify in Comments)	3
Other (please specify in Comments)		2
- No tumour/lesion present	- No tumour/lesion present	1
cyst (non-neoplastic)	- No tumour/lesion present	1
cholangiocarcinoma	biliary intraductal papillary neoplasia	1
cyst (non-neoplastic)		1
- No tumour/lesion present		1
bile duct adenoma / peribiliary gland hamartoma		1
biliary intraductal papillary neoplasia		1
hepatocellular adenoma NOS	Other (please specify in Comments)	1
biliary intra-epithelial neoplasia (BilIN)	cholangiocarcinoma	1
cholangiocarcinoma	cholangiocarcinoma	1
cholangiocarcinoma	combined hepatocellular and cholangiocarcinoma	1
cholangiocarcinoma	metastasis (further comment in Comments)	1

Pattern:	Popularity:
cholestasis, bilirubinostasis	47.3%
Other (please specify in Comments)	20.4%
chronic biliary disease	15.1%
not applicable	10.8%
acute venous outflow obstruction	3.2%
vascular disease	3.2%
abnormal, no pattern discernible	2.2%
chronic hepatitis	1.1%
within normal limits	1.1%

Pattern 1:	Pattern 2:	Count:
cholestasis, bilirubinostasis		36
Other (please specify in Comments)		16
chronic biliary disease		13
not applicable		7
		3
abnormal, no pattern discernible		2
acute venous outflow obstruction		2
not applicable	not applicable	2
cholestasis, bilirubinostasis	Other (please specify in Comments)	2
vascular disease		2
within normal limits		1
acute venous outflow obstruction	cholestasis, bilirubinostasis	1
cholestasis, bilirubinostasis	cholestasis, bilirubinostasis	1
Other (please specify in Comments)	cholestasis, bilirubinostasis	1
vascular disease	cholestasis, bilirubinostasis	1
cholestasis, bilirubinostasis	chronic biliary disease	1
cholestasis, bilirubinostasis	not applicable	1
chronic hepatitis		1

Stages:	Popularity:
not applicable / no special stains to assess architecture	52.7%
advanced fibrosis with bridging and nodularity/cirrhosis	21.5%
Other (please specify in Comments)	6.5%
fibrosis with bridging between vascular structures	3.2%
subtle architectural abnormalities, vascular disease	1.1%

Diagnostic categories:	Popularity:
large bile duct obstruction	19.4%
Other (please enter alternative diagnosis in comments box)	11.8%
transplant complication NOS (please specify in comments box)	10.8%
chronic cholangiopathy NOS	7.5%
hepatolithiasis	5.4%
- not applicable (insufficient non-lesional tissue)	5.4%
- histologically indeterminate for cause	3.2%
primary biliary cholangitis	1.1%
primary sclerosing cholangitis	1.1%
ascending cholangitis	1.1%

Diagnosis Combination:	Count:
[No selections made]	38
large bile duct obstruction	14
Other (please enter alternative diagnosis in comments box)	9
transplant complication NOS (please specify in comments box)	9
- not applicable (insufficient non-lesional tissue)	5
chronic cholangiopathy NOS	5
- histologically indeterminate for cause	3
ascending cholangitis	1
chronic cholangiopathy NOS, hepatolithiasis	1
chronic cholangiopathy NOS, large bile duct obstruction	1
hepatolithiasis	1
hepatolithiasis, large bile duct obstruction	1
hepatolithiasis, Other (please enter alternative diagnosis in comments box)	1
hepatolithiasis, primary biliary cholangitis	1
large bile duct obstruction, Other (please enter alternative diagnosis in comments box)	1
large bile duct obstruction, transplant complication NOS (please specify in comments box)	1
primary sclerosing cholangitis	1

Original report and further information (if any): well and moderately differentiated intrahepatic cholangiocarcinoma, periductal infiltrating-type, extensively involving hilar, septal and peripheral portal tract structures.

Comments from collator (second collator gave comments at meeting) – consensus diagnosis for cholangiocarcinoma - 82 have clear diagnosis of CCa, +2 for included CCa in comments.
lose 10 marks for no suggestion of CCa (7 responses). agreed

? how to score CCa in differential, would refer.(2) if favouring CCA full marks

Wide range of choices in pattern, stage, diagnosis – can't score for these.

EQA lite; for full marks – diagnosis of cholangiocarcinoma. Responses of 'other' where cholangiocarcinoma is considered in the comments, would refer for second opinion also score 10. Any response without cholangiocarcinoma score 0. Not scored on in situ changes, or on any aspect of the background liver disease.

Case Number: LY7

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Male 63. Sarcoid liver disease, recent imagimg shows focal lesion

Specimen: liver biopsy

Macroscopic: 2 cores of liver

Immunohistochemistry: Glypican 3, CD34, retic

Original Diagnosis: HCC, background variable fibrosis, not cirrhotic, but no granulomas

Tumour:	Popularity:
hepatocellular carcinoma	97.8%
Other (please specify in Comments)	3.2%
hepatocellular lesion, well differentiated NOS (please add comment)	2.2%
hepatocellular lesion - dysplastic nodule	2.2%

Tumour 1:	Tumour 2:	Count:
hepatocellular carcinoma		85
hepatocellular carcinoma	hepatocellular lesion - dysplastic nodule	2
hepatocellular carcinoma	Other (please specify in Comments)	2
Other (please specify in Comments)	Other (please specify in Comments)	1
hepatocellular carcinoma	hepatocellular lesion, well differentiated NOS (please add comment)	1
hepatocellular lesion, well differentiated NOS (please add comment)		1
hepatocellular carcinoma	hepatocellular carcinoma	1

Pattern:	Popularity:
Other (please specify in Comments)	31.2%
chronic hepatitis	25.8%
chronic biliary disease	18.3%
abnormal, no pattern discernible	9.7%
not applicable	6.5%
within normal limits	4.3%
granulomatous	3.2%
cholestasis, bilirubinostasis	2.2%
lobular hepatitis	1.1%

Pattern 1:	Pattern 2:	Count:
Other (please specify in Comments)		25
chronic hepatitis		22
chronic biliary disease		11
abnormal, no pattern discernible		9
		5
within normal limits		4
not applicable		4
granulomatous		2
chronic biliary disease	Other (please specify in Comments)	2
chronic hepatitis	Other (please specify in Comments)	2
lobular hepatitis		1
chronic biliary disease	cholestasis, bilirubinostasis	1
chronic biliary disease	chronic biliary disease	1
chronic biliary disease	granulomatous	1

chronic biliary disease	not applicable	1
not applicable	not applicable	1
cholestasis, bilirubinostasis		1

Stages:	**Popularity:**
not applicable / no special stains to assess architecture	31.2%
mild/early fibrosis without bridging	19.4%
no fibrosis/equivocal fibrosis	16.1%
fibrosis with bridging between vascular structures	12.9%
advanced fibrosis with bridging and nodularity/cirrhosis	6.5%
Other (please specify in Comments)	3.2%
hepatocyte loss or bridging - favour collapse not fibrosis	2.2%

Diagnostic categories:	**Popularity:**
Other (please enter alternative diagnosis in comments box)	17.2%
vanishing bile duct syndrome	12.9%
- histologically indeterminate for cause	11.8%
sarcoidosis	7.5%
chronic cholangiopathy NOS	7.5%
- not applicable (insufficient non-lesional tissue)	5.4%
storage disorder (please specify in comments box)	3.2%
manifestation of systemic or extrahepatic disease (please specify in comments box)	1.1%
autoimmune hepatitis	1.1%
primary biliary cholangitis	1.1%
primary sclerosing cholangitis	1.1%
- no evidence of diffuse/background liver disease	1.1%

Diagnosis Combination:	**Count:**
[No selections made]	32
Other (please enter alternative diagnosis in comments box)	14
- histologically indeterminate for cause	11
vanishing bile duct syndrome	9
chronic cholangiopathy NOS	6
sarcoidosis	6
- not applicable (insufficient non-lesional tissue)	4
storage disorder (please specify in comments box)	2
- no evidence of diffuse/background liver disease	1
- not applicable (insufficient non-lesional tissue), chronic cholangiopathy NOS	1
autoimmune hepatitis	1
manifestation of systemic or extrahepatic disease (please specify in comments box)	1
Other (please enter alternative diagnosis in comments box), storage disorder (please specify in comments box)	1
Other (please enter alternative diagnosis in comments box), vanishing bile duct syndrome	1
primary biliary cholangitis, vanishing bile duct syndrome	1
primary sclerosing cholangitis	1
sarcoidosis, vanishing bile duct syndrome	1

Original report and further information (if any): HCC, background variable fibrosis, not cirrhotic, but no granulomas

Collator summary (2 collators gave comments at meeting):

COMMENT (Tumour)
7 - chose tumour 2 option BUT 19 made a comment; dysplastic -5, hcc well - 2, odd - 1,
poor diff ca- 1

Differentiation
80 - no comment

5 - well diff
7 - mod /G2
1 - poor diff ca

COMMENT (stage)
Expect some attempt with reticulin given, hcc minor part of core (although dysplasia also present?
29 - not applicable/ no stain and 8 left blank

none/ equivocal/ mild = 32
Bridging = 12 + 1 in comment
Advanced = 6 + 1 in comment
other comments; SOL = 7, NRH = 2, MRN =1

COMMENT (diagnosis)
No consenus:
33 - cholangiopathy, VBD, ductopenia, burnt out sarcoid, including text
25 - no granuloma/ features of sarcoid
25 - no diagnosis given or comment in text - can this be discouraged in some way???
24 - Alpha- 1antitrypsin (9 seen in lesional tissue only)
6 – sarcoid

Collator summary/committee views:

Lose 5 for poorly diff Ca as strong consensus for HCC alone.

No consensus regarding background liver pattern or stage

For EQA lite; For full marks diagnosis of HCC alone. Lose 5 if HCC only included as a differential as there is consensus for a definitive diagnosis.

Case Number: LY8

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Male 44. Referred with likely cirrhosis (nodular liver, ascites, varices). Previous alcohol history (60-70 units/week). Caeruloplasmin <0.03 (?Wilsons).

Specimen: Liver biopsy (H&E, sirius red, orcein and rhodanine)

Macroscopic: Two tan cores, 20 and 14mm long.

Immunohistochemistry: sirius red, orcein, rhodanine

Original Diagnosis: Chronic liver disease in stage of cirrhosis, with mild steatosis, mild to moderate inflammation and patchy copper and copper-associated protein deposition. Comment: Histological findings are not specific but most compatible with Wilson

Tumour:	Popularity:
- No tumour/lesion present	97.8%
Other (please specify in Comments)	1.1%

Tumour 1:	Tumour 2:	Count:
- No tumour/lesion present		86
- No tumour/lesion present	- No tumour/lesion present	5
		1
Other (please specify in Comments)		1

Pattern:	Popularity:
steatohepatitis	43.0%
Other (please specify in Comments)	33.3%

steatosis	30.1%
chronic hepatitis	22.6%
not applicable	5.4%
chronic biliary disease	4.3%
cholestasis, bilirubinostasis	1.1%

Pattern 1:	Pattern 2:	Count:
steatohepatitis		21
Other (please specify in Comments)		14
chronic hepatitis		8
steatosis	Other (please specify in Comments)	8
steatosis		7
steatohepatitis	Other (please specify in Comments)	6
steatosis	chronic hepatitis	5
steatohepatitis	chronic biliary disease	4
chronic hepatitis	steatohepatitis	3
chronic hepatitis	steatosis	3
steatohepatitis	not applicable	2
not applicable		2
		2
steatohepatitis	chronic hepatitis	1
steatosis	not applicable	1
chronic hepatitis	Other (please specify in Comments)	1
Other (please specify in Comments)	steatohepatitis	1
steatosis	steatohepatitis	1
cholestasis, bilirubinostasis	steatosis	1
Other (please specify in Comments)	steatosis	1
steatohepatitis	steatosis	1

Stages:	Popularity:
advanced fibrosis with bridging and nodularity/cirrhosis	97.8%
fibrosis with bridging between vascular structures	2.2%

Diagnostic categories:	Popularity:
Wilson disease	57.0%
fatty liver disease - alcohol related liver disease	33.3%
fatty liver disease - either alcohol or non-alcohol	20.4%
Other (please enter alternative diagnosis in comments box)	7.5%
- histologically indeterminate for cause	6.5%
fatty liver disease - non-alcohol related fatty liver disease	2.2%
chronic cholangiopathy NOS	2.2%

Diagnosis Combination:	Count:
Wilson disease	30
fatty liver disease - alcohol related liver disease	15
fatty liver disease - alcohol related liver disease, Wilson disease	12
fatty liver disease - either alcohol or non-alcohol	10
fatty liver disease - either alcohol or non-alcohol, Wilson disease	9
- histologically indeterminate for cause	5
Other (please enter alternative diagnosis in comments box)	4
chronic cholangiopathy NOS, fatty liver disease - alcohol related liver disease	2
fatty liver disease - alcohol related liver disease, Other (please enter alternative diagnosis in comments box)	2
fatty liver disease - non-alcohol related fatty liver disease, Wilson disease	2
[No selections made]	1
- histologically indeterminate for cause, Other (please enter alternative diagnosis in comments box)	1

Original report and further information (if any): Chronic liver disease in stage of cirrhosis, with mild steatosis, mild to moderate inflammation and patchy copper and copper-associated protein deposition. Comment: Histological findings are not specific but most compatible with Wilson

Collator summary (2 collators gave comments at meeting):
COMMENT (pattern)
66 - with steatosis or steatohepatitis as primary or secondary pattern
but 80 if include those terms in the text ***? consensus***
11 = other, 1 = ch hep, 1= non applic, 1=blank,

COMMENT (diagnosis)
Wilson disease as single or as joint diagnosis - 53
AND Hsto indermininate or Other or Blank with DD of WD - 62
AND various fatty liver disease (primary & secondary) with text mention for WD - 73 !!!
(depends on participant 58!!! for consensus)

Committee comments

Mention of Wilsons in diagnosis drop down or mentioned in text reaches consensus. Ask audience.

Difficult to collate:

No mention of Wilsons anywhere in response/not considered as a DD lose points 5

Make a definitive alternative diagnosis or say 'not Wilson' lose 5 ?10 ask audience

Less than cirrhosis lose 5 can score on this.

RMB: At members meeting:

Votes – yes can use for scoring

No mention of fat score 0

No mention of Wilson in response score 5

'not wilson' score 0

Commented [JW1]: delete before circulating

For EQAlite: On review post meeting - insufficient consensus to include this case for scoring. Original diagnosis: Chronic liver disease in stage of cirrhosis, with mild steatosis, mild to moderate inflammation and patchy copper and copper-associated protein deposition. Comment: Histological findings are not specific but most compatible with Wilson.

This is therefore an educational case. There will be a presentation on Wilson Disease at the 2022 annual liver pathology update meeting on 8th December 2022.

Case Number: LY9

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Female 34. Abnormal LFTs picked up on bloods, US abdo showed fatty liver, contracted gallbladder containing several small stones, mild splenomegaly. Admitted to hospital for jaundice, legs swelling and deranged LFTs. Clinical diagnosis impression of decompensated chronic liver disease, with ascites, Wilsonâ€™s disease under investigation.

Specimen: Explanted liver (H&E, sirius red and orcein)

Macroscopic: Explanted liver (1256g), micronodular with yellow/green nodules

Immunohistochemistry: sirius red, orcein,

Original Diagnosis: Acute hepatocellular injury with severe cell swelling and blirrubinostasis and micro and macrovacuolar steatosis, in the context of predominantly micronodular cirrhosis. Note; features are consistent with acute decompensation of chronic Wilson

Tumour:	Popularity:
- No tumour/lesion present	95.7%
Other (please specify in Comments)	2.2%

Tumour 1:	Tumour 2:	Count:
- No tumour/lesion present		84
- No tumour/lesion present	- No tumour/lesion present	5
		2
Other (please specify in Comments)		2

Pattern:	Popularity:
Other (please specify in Comments)	40.9%
cholestasis, bilirubinostasis	34.4%
steatosis	14.0%
steatohepatitis	12.9%
chronic hepatitis	11.8%
chronic biliary disease	7.5%
abnormal, no pattern discernible	4.3%
iron overload	1.1%
not applicable	1.1%
lobular hepatitis	1.1%

Pattern 1:	Pattern 2:	Count:
Other (please specify in Comments)		31
cholestasis, bilirubinostasis		11
steatohepatitis		5
chronic hepatitis		5
cholestasis, bilirubinostasis	steatosis	4
abnormal, no pattern discernible		4
steatosis		3
chronic biliary disease	cholestasis, bilirubinostasis	3
cholestasis, bilirubinostasis	steatohepatitis	3
cholestasis, bilirubinostasis	Other (please specify in Comments)	2
Other (please specify in Comments)	steatosis	2
chronic hepatitis	cholestasis, bilirubinostasis	2
Other (please specify in Comments)	cholestasis, bilirubinostasis	2
steatohepatitis	cholestasis, bilirubinostasis	2
chronic biliary disease		2
cholestasis, bilirubinostasis	chronic biliary disease	2
chronic hepatitis	chronic hepatitis	1
chronic hepatitis	lobular hepatitis	1
not applicable	not applicable	1
		1
steatosis	cholestasis, bilirubinostasis	1
steatosis	Other (please specify in Comments)	1
iron overload		1
chronic hepatitis	steatohepatitis	1
steatosis	steatohepatitis	1
chronic hepatitis	steatosis	1

Stages:	Popularity:
advanced fibrosis with bridging and nodularity/cirrhosis	97.8%
hepatocyte loss or bridging - favour collapse not fibrosis	2.2%

Diagnostic categories:	Popularity:
Wilson disease	74.2%
Other (please enter alternative diagnosis in comments box)	7.5%
- histologically indeterminate for cause	7.5%
chronic cholangiopathy NOS	5.4%
fatty liver disease - either alcohol or non-alcohol	5.4%
large bile duct obstruction	2.2%
chronic viral hepatitis (hepatotrophic viruses - please specify in comments box)	1.1%
acute / subacute hepatitis - autoimmune / drug / viral	1.1%
iron overload - acquired, secondary	1.1%
fatty liver disease - alcohol related liver disease	1.1%
fatty liver disease - non-alcohol related fatty liver disease	1.1%

Diagnosis Combination:	Count:
Wilson disease	62
- histologically indeterminate for cause	7
chronic cholangiopathy NOS	5
Other (please enter alternative diagnosis in comments box)	5
fatty liver disease - either alcohol or non-alcohol, Wilson disease	3
fatty liver disease - either alcohol or non-alcohol	2
large bile duct obstruction	2
Other (please enter alternative diagnosis in comments box), Wilson disease	2
acute / subacute hepatitis - autoimmune / drug / viral, Wilson disease	1
chronic viral hepatitis (hepatotrophic viruses - please specify in comments box)	1
fatty liver disease - alcohol related liver disease	1
fatty liver disease - non-alcohol related fatty liver disease, Wilson disease	1
iron overload - acquired, secondary	1

Original report and further information (if any): Acute hepatocellular injury with severe cell swelling and blirrubinostasis and micro and macrovacuolar steatosis, in the context of predominantly micronodular cirrhosis. Note; features are consistent with acute decompensation of chronic Wilson

Collator summary (comments from 2 collators at meeting):

Diagnosis:

Clear consensus if combine as below - WD as sole or Co-diagnosis or as differential diagnosis in the text = 82

Collator comments committee views:

Combined Wilson alone or in diff diagnosis reaches consensus

Favour alternative diagnosis with no mention of Wilson lose 5 or 10 ask audience (favour 5)

Consensus for cirrhosis, lose 5 for any other response (check if those saying acute have a text comment re background fibrosis).

RMB at members meeting:

Members voted to say the case can be used for scoring

Members voted to score 0 if no consideration of Wilson in response

For EQA lite; To score 10 must say advanced fibrosis/cirrhosis and have Wilson as differential diagnosis. Lose 5 if less than cirrhosis. Lose 10 if Wilson not considered as differential.

Case Number: LY10

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Male 64. liver metastases

Specimen: targetted liver biopsy

Macroscopic: 1 core 10mm and 2 fragments

Immunohistochemistry: following initial assessment - not submitted for EQA

Original Diagnosis: metastatic malignant melanoma. IHC +ve for SOX 10, S100, -ve for AE1/3 From MDT - metasatatic melanoma liver, lung, peritoneal mets, unknown primary. commenced immunotherapy.

Tumour:	Popularity:
metastasis (further comment in Comments)	79.6%
Other (please specify in Comments)	18.3%
hepatocellular carcinoma	6.5%
- No tumour/lesion present	1.1%
hepatocellular lesion, well differentiated NOS (please add comment)	1.1%

Tumour 1:	Tumour 2:	Count:
metastasis (further comment in Comments)		67
Other (please specify in Comments)		13
hepatocellular carcinoma		5
metastasis (further comment in Comments)	Other (please specify in Comments)	3
Other (please specify in Comments)	Other (please specify in Comments)	1
metastasis (further comment in Comments)	- No tumour/lesion present	1
metastasis (further comment in Comments)	hepatocellular carcinoma	1
hepatocellular lesion, well differentiated NOS (please add comment)	metastasis (further comment in Comments)	1
metastasis (further comment in Comments)	metastasis (further comment in Comments)	1

Pattern:	Popularity:
not applicable	23.7%
Other (please specify in Comments)	20.4%
within normal limits	18.3%
cholestasis, bilirubinostasis	10.8%
iron overload	2.2%
abnormal, no pattern discernible	2.2%
acute venous outflow obstruction	1.1%
chronic hepatitis	1.1%
lobular hepatitis	1.1%

Pattern 1:	Pattern 2:	Count:
		19
not applicable		19

Other (please specify in Comments)		18
within normal limits		17
cholestasis, bilirubinostasis		10
not applicable	not applicable	3
abnormal, no pattern discernible		2
acute venous outflow obstruction		1
iron overload		1
lobular hepatitis		1
chronic hepatitis	chronic hepatitis	1
iron overload	Other (please specify in Comments)	1

Stages:	**Popularity:**
not applicable / no special stains to assess architecture	59.1%
no fibrosis/equivocal fibrosis	12.9%
mild/early fibrosis without bridging	2.2%

Diagnostic categories:	**Popularity:**
- no evidence of diffuse/background liver disease	15.1%
- not applicable (insufficient non-lesional tissue)	14.0%
Other (please enter alternative diagnosis in comments box)	12.9%
- histologically indeterminate for cause	1.1%

Diagnosis Combination:	**Count:**
[No selections made]	53
- no evidence of diffuse/background liver disease	14
- not applicable (insufficient non-lesional tissue)	13
Other (please enter alternative diagnosis in comments box)	12
- histologically indeterminate for cause	1

Original report and further information (if any): metastatic malignant melanoma. IHC +ve for SOX 10, S100, -ve for AE1/3 From MDT - metasatatic melanoma liver, lung, peritoneal mets, unknown primary. commenced immunotherapy.

Collator summary (second collator commented at meeting):

Met alone 68, add met +other (3)=71,add met + no lesion (1) = 72 not quite consensus
Add 'other' (14) reaches consensus, 3 of these didn't have MM in DD ?could lose 5 – probably not as malignant diagnosis and ask for more work.

Committee view:
MM as favoured diagnosis or in DD =10 full marks
Met without mention of MM do immuno =5
HCC but would do immuno =5
HCC as diagnosis with no further comment=0

?Lose 10 agreed by comm as above for HCC alone and no immuno further work (5)
?Lose 5 for choosing both hepatocellular neoplasm and met (2) benefit of doubt
I suspect in these it is a quirk of the dropdown use (expressing a DD rather than 2 diagnoses which is what is intended)– give benefit of doubt? All score 10 for malignant diagnosis? See above

1 response with multiple myeloma score 5 would do immuno

Only a small amount of background liver no consensus, many mention SOL effect.

For EQA lite (RMB); Consensus for malignant melanoma (MM) as favoured or differential, need to include this for full marks. Met and mention immuno without specifying MM lose 5. HCC or other diagnosis (myeloma) but would do immuno lose 5. HCC as diagnosis with no further comment score 0.

Case Number: LY11

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Female 65. ?Autoimmune hepatitis, abnormal LFT's, ANA positive. AMA negative.

Specimen: Liver biopsy

Macroscopic: Liver biopsy: Two cores of cream tan tissue received measuring 19mm and 19mm both processed in 1A.

Immunohistochemistry: van Gieson, Victoria blue

Original Diagnosis: The principal abnormality in this biopsy is that of florid granulomatous/lymphocytic cholangitis with bile duct lesions diagnostic for primary biliary cholangitis. We note that the patient is ANA positive and thought to be AMA negative indicating that this is likely to represent AMA-negative autoimmune cholangiopathy. There is some spill-over of inflammation into acinar zone 1 with plasma cells in the infiltrate but the degree of this is thought insufficient to consider any form of PBC/AIH overlap. There is only mild (stage 1) fibrosis.

Tumour:	Popularity:
- No tumour/lesion present	98.9%
Other (please specify in Comments)	1.1%

Tumour 1:	Tumour 2:	Count:
- No tumour/lesion present		87
- No tumour/lesion present	- No tumour/lesion present	5
Other (please specify in Comments)		1

Pattern:	Popularity:
chronic biliary disease	68.8%
chronic hepatitis	40.9%
granulomatous	24.7%
Other (please specify in Comments)	3.2%
lobular hepatitis	2.2%
cholestasis, bilirubinostasis	1.1%
not applicable	1.1%

Pattern 1:	Pattern 2:	Count:
chronic biliary disease		35
chronic hepatitis		10
chronic hepatitis	chronic biliary disease	9
chronic biliary disease	chronic hepatitis	7
chronic hepatitis	granulomatous	7
chronic biliary disease	granulomatous	6
granulomatous	chronic hepatitis	5
granulomatous	chronic biliary disease	2
lobular hepatitis	chronic biliary disease	2
granulomatous		2
		2
chronic biliary disease	Other (please specify in Comments)	2
not applicable		1
Other (please specify in Comments)		1
granulomatous	cholestasis, bilirubinostasis	1
chronic biliary disease	chronic biliary disease	1

Stages:	Popularity:
mild/early fibrosis without bridging	59.1%
fibrosis with bridging between vascular structures	28.0%

no fibrosis/equivocal fibrosis	10.8%
not applicable / no special stains to assess architecture	1.1%
advanced fibrosis with bridging and nodularity/cirrhosis	1.1%

Diagnostic categories:	**Popularity:**
primary biliary cholangitis	58.1%
overlap syndrome	29.0%
autoimmune hepatitis	20.4%
Other (please enter alternative diagnosis in comments box)	4.3%
chronic cholangiopathy NOS	3.2%
granulomatous disease NOS (please specify in comments box)	2.2%
- histologically indeterminate for cause	1.1%

Diagnosis Combination:	**Count:**
primary biliary cholangitis	42
overlap syndrome	19
autoimmune hepatitis	10
overlap syndrome, primary biliary cholangitis	6
autoimmune hepatitis, primary biliary cholangitis	4
autoimmune hepatitis, granulomatous disease NOS (please specify in comments box)	2
autoimmune hepatitis, overlap syndrome	2
chronic cholangiopathy NOS	2
Other (please enter alternative diagnosis in comments box)	2
Other (please enter alternative diagnosis in comments box), primary biliary cholangitis	2
- histologically indeterminate for cause	1
autoimmune hepatitis, chronic cholangiopathy NOS	1

Original report and further information (if any): The principal abnormality in this biopsy is that of florid granulomatous/lymphocytic cholangitis with bile duct lesions diagnostic for primary biliary cholangitis. We note that the patient is ANA positive and thought to be AMA negative indicating that this is likely to represent AMA-negative autoimmune cholangiopathy. There is some spill-over of inflammation into acinar zone 1 with plasma cells in the infiltrate but the degree of this is thought insufficient to consider any form of PBC/AIH overlap. There is only mild (stage 1) fibrosis.

Collator summary (second collator commented at meeting):

Chronic biliary pattern alone 36, add chronic biliary + granulomas and 'other' where biliary described (13) = 49 not consensus

Chronic biliary plus additional chronic or lobular hepatitis (18) = 68

No clear consensus for pattern

Stage: consensus if mild and bridging are combined

?Lose 5 for no fibrosis, advanced fibrosis or NA (there was a stain) committee view not to score on stage

Diagnosis:

PBC or biliary diagnosis alone = 47

Overlap alone (19) or biliary plus AIH (17) takes it to consensus 83

?lose 5 for just an AIH diagnosis where there is no mention of biliary anywhere in the response committee agree

For EQA lite; to score 10 need to recognise biliary pattern and/or potential biliary diagnosis, accept additional hepatitis +/- autoimmune hepatitis or overlap. Responses with hepatitis/AIH without mention of biliary component score 5.

Case Number: LY12

Number of responses: 93. Date of analysis: 10 Jun 2022

Clinical: Male 58. Liver transplant for alcohol related liver disease

Specimen: Explanted liver

Macroscopic: Liver , 1240g, macronodular cirrhosis

Immunohistochemistry: PASD stain

Original Diagnosis: PASD globules identified, Patient is PZ phenotype (our lab is INAB accredited rather than CPA, but I have ansered yes below as strandard is similar)

Tumour:	Popularity:
- No tumour/lesion present	96.8%
biliary intraductal papillary neoplasia	1.1%
Other (please specify in Comments)	1.1%

Tumour 1:	Tumour 2:	Count:
- No tumour/lesion present		85
- No tumour/lesion present	- No tumour/lesion present	5
		1
biliary intraductal papillary neoplasia		1
Other (please specify in Comments)		1

Pattern:	Popularity:
Other (please specify in Comments)	53.8%
steatosis	38.7%
steatohepatitis	23.7%
chronic hepatitis	17.2%
cholestasis, bilirubinostasis	17.2%
not applicable	3.2%
abnormal, no pattern discernible	3.2%

Pattern 1:	Pattern 2:	Count:
Other (please specify in Comments)		16
steatosis	Other (please specify in Comments)	15
steatohepatitis	Other (please specify in Comments)	8
steatohepatitis	cholestasis, bilirubinostasis	6
Other (please specify in Comments)	steatosis	6
steatosis	cholestasis, bilirubinostasis	5
steatosis		5
chronic hepatitis		5
not applicable		3
chronic hepatitis	cholestasis, bilirubinostasis	3
steatohepatitis		3
chronic hepatitis	steatosis	3
steatohepatitis	chronic hepatitis	2
		2
abnormal, no pattern discernible		2

cholestasis, bilirubinostasis		1
Other (please specify in Comments)	cholestasis, bilirubinostasis	1
steatosis	chronic hepatitis	1
abnormal, no pattern discernible	Other (please specify in Comments)	1
chronic hepatitis	Other (please specify in Comments)	1
Other (please specify in Comments)	Other (please specify in Comments)	1
chronic hepatitis	steatohepatitis	1
Other (please specify in Comments)	steatohepatitis	1
steatohepatitis	steatosis	1

Stages:	**Popularity:**
advanced fibrosis with bridging and nodularity/cirrhosis	97.8%
Other (please specify in Comments)	1.1%

Diagnostic categories:	**Popularity:**
fatty liver disease - alcohol related liver disease	49.5%
Other (please enter alternative diagnosis in comments box)	47.3%
storage disorder (please specify in comments box)	31.2%
manifestation of systemic or extrahepatic disease (please specify in comments box)	16.1%
fatty liver disease - either alcohol or non-alcohol	10.8%
- histologically indeterminate for cause	3.2%
fatty liver disease - non-alcohol related fatty liver disease	1.1%

Diagnosis Combination:	**Count:**
fatty liver disease - alcohol related liver disease, Other (please enter alternative diagnosis in comments box)	20
Other (please enter alternative diagnosis in comments box)	18
fatty liver disease - alcohol related liver disease, storage disorder (please specify in comments box)	14
fatty liver disease - alcohol related liver disease, manifestation of systemic or extrahepatic disease (please specify in comments box)	8
storage disorder (please specify in comments box)	7
manifestation of systemic or extrahepatic disease (please specify in comments box)	6
fatty liver disease - either alcohol or non-alcohol, Other (please enter alternative diagnosis in comments box)	5
fatty liver disease - alcohol related liver disease	4
fatty liver disease - either alcohol or non-alcohol, storage disorder (please specify in comments box)	4
- histologically indeterminate for cause, storage disorder (please specify in comments box)	2
[No selections made]	1
- histologically indeterminate for cause	1
fatty liver disease - either alcohol or non-alcohol, manifestation of systemic or extrahepatic disease (please specify in comments box)	1
fatty liver disease - non-alcohol related fatty liver disease, storage disorder (please specify in comments box)	1
Other (please enter alternative diagnosis in comments box), storage disorder (please specify in comments box)	1

Original report and further information (if any): PASD globules identified, Patient is PZ phenotype (our lab is INAB accredited rather than CPA, but I have ansered yes below as strandard is similar)

Collator summary (second collator at meeting):

Biliary intraductal a mistake? Inclined to ignore

No consensus for pattern (end stage liver)

Stage: consensus (full!) for advanced

Diagnosis:

There is consensus (89) accounting for dropdown and text for DPAS + globules possible A1ATdefic +/- end stage FLD cw ArLD Hx, should we try and separate those who said both from those who just said A1AT? Probably not (tricky) *committee agree can't separate*

'Some big globules present - would correlate with other findings / stains. This could be alcoholic cirrhosis'
Probably OK? yes

?Lose 5 if no mention globules/A1AT (2) both have ArLD in diagnosis, both chronic hepatitis pattern (1 + SH) – no consensus for pattern overall agreed by committee if no mention of globules lose 5

?Lose 10 for GSD chronic hepatitis pattern and storage disorder diagnosis agreed

At members meeting GSD response does say cirrhosis, just to lose 5 rather than 10.

For EQA lite; to score full marks need to say cirrhosis and recognise DPAS positive globules/suggest A1AT deficiency. Lose 5 if missing either of these. Picture is in keeping with end stage alcohol related liver disease (not scored).

Version: 1.19