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Impact of surveillance on staging & survival of HCC in HIV/HCV co-infected individuals

Liver Cancer in HIV Study Group

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Surveillance for HCC in HIV/HCV patients

Background

- Increased liver morbidity in HIV due to HCV
- % of liver deaths due to HCC is increasing – due to HCV¹
- Surveillance for HCC
 - in HBV prolongs life²
 - benefits in HCV unproven^{3,4}
- No studies on HCC surveillance in HIV/HCV co-infection
 - expert opinion: cirrhotic individuals - liver USS every 6 months^{3,4}
 - aggressive HCC in HIV may mean surveillance ineffective

Surveillance for HCC in HIV/HCV patients

Methods

- Liver cancer in HIV Study Group: global consortium of investigators to study HCC in HIV
- Multi-centre retrospective cohort study
 - HIV/HCV co-infection & HCC (AASLD 2010) 1992-2012
- Definition:
 - Screened = asymptomatic with abnormal AFP/imaging
 - Unscreened = symptomatic

Surveillance for HCC in HIV/HCV patients

Statistics

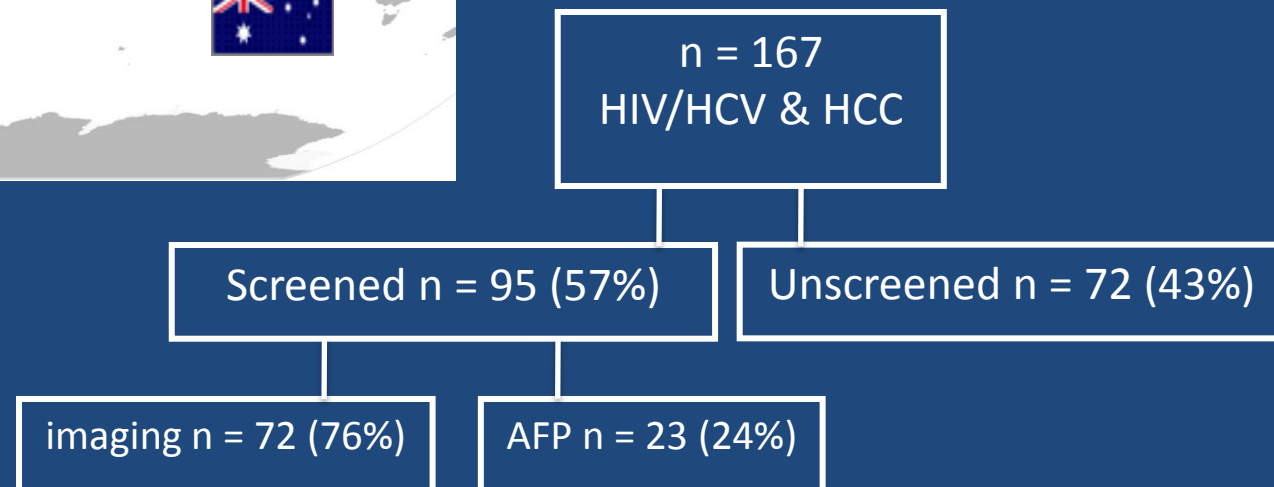
- Continuous variables
 - Student's t-test or Mann-Whitney U test
- Categorical variables
 - Chi-squared analysis or Fisher's exact test.
- Survival:
 - Kaplan Meier Survival Curve
 - Estimation of lead time (T) of screened patients
$$T = \text{TDT} * 3 \log [\text{median tumour size unscreened/screened}] * 1/\log(2)$$
$$T = 112 \text{ days} * 3 \log [5.0\text{cm} / 3.0\text{cm}] * 1/\log(2) = 248 \text{ days} = 8.12 \text{ months}$$

Surveillance for HCC in HIV/HCV patients Results (1)



38 sites, 8 countries:

- North America: USA, Canada
- South America: Brazil, Argentina
- Europe: Germany, Spain, UK
- Australia



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Results (2) Patient Characteristics

	Screened n=95 (57%)	Unscreened n=72 (43%)	P
Age (yrs), mean \pm SD	50.8 (\pm 8.6)	54.1 (\pm 7.9)	0.015
Male	90 (95%)	64 (89%)	0.162
Alcohol abuse	30 (33%)	34 (49%)	0.032
ART	82 (86%)	54 (75%)	0.063
ART duration (yrs), mean	9.6	7.1	0.006
CD4 T cell Median	340	273	0.015
% < 200mm ³	22/92 (24%)	24/72 (33%)	0.180
HIV RNA <400 copies/ml	72/94 (77%)	38/72 (53%)	0.001
CTP Stage A	54 (57%)	24 (33%)	0.008
Stage B	31 (33%)	33 (46%)	
Stage C	10 (11%)	15 (21%)	

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Results (3) Tumour Characteristics

	Screened n=95 (57%)	Unscreened n=72 (43%)	P
Hepatic lesions			
Solitary	55 (58%)	30 (42%)	0.038
Multiple / Infiltrative	40 (42%)	42 (58%)	
Size in cm, median (range)	3.0 (1.2-17)	5.0 (1.8-16)	< 0.001
Portal Vein Thrombosis	11 (12%)	20 (28%)	0.008
Extrahepatic metastases	8 (8%)	19 (26%)	0.002
AFP ng/ml, median (IQR)	63 (14-779)	667 (23-22,161)	<0.001
Meets Milan Criteria	61 (67%)	18 (27%)	< 0.001

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Results (4) Tumour Staging

	Screened n=95 (57%)	Unscreened n=72 (43%)	P
BCLC Stage			
A	42 (44%)	5 (7%)	<0.001
B	16 (16%)	12 (17%)	
C	25 (26%)	33 (46%)	
D	12 (13%)	22 (31%)	
Stage C&D	37 (39%)	55 (76%)	<0.001

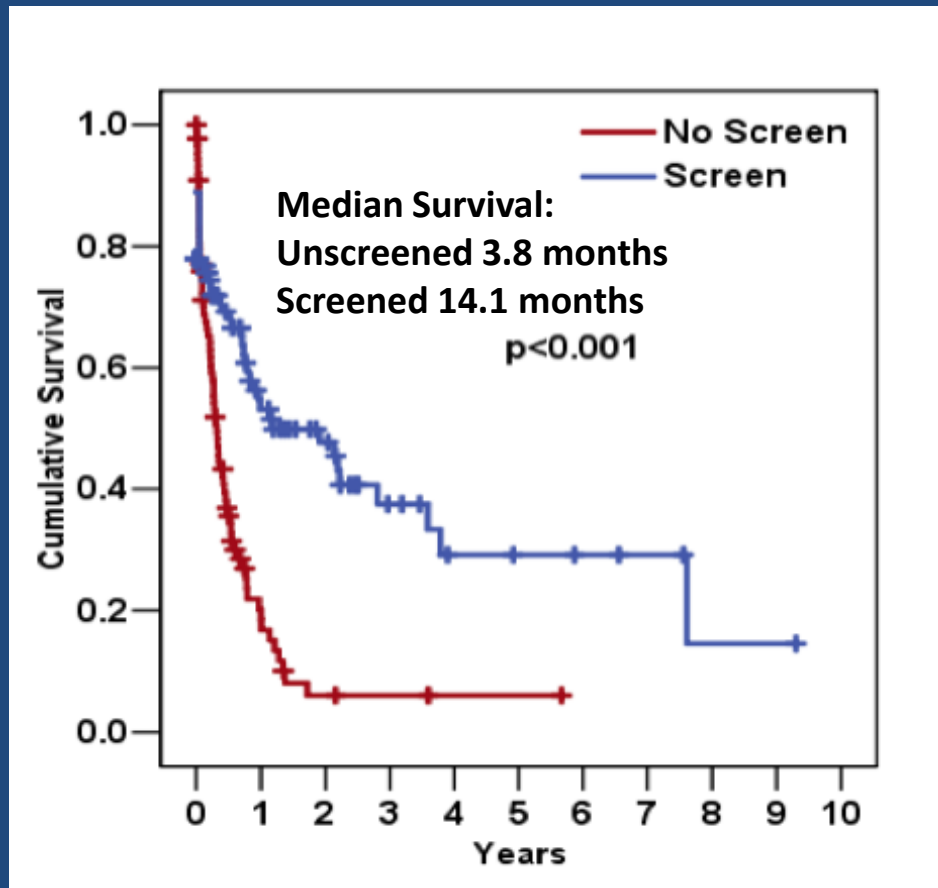
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Results (5) Therapy

	Screened n=95 (57%)	Unscreened n=72 (43%)	P
Potentially curative therapy	44 (46%)	10 (14%)	< 0.001
Surgical resection	13	2	
Transplantation	8	1	
Radiofrequency ablation	15	5	
Ethanol Injections	8	2	
Effective, Non-Curative Therapy	27 (28%)	16 (22%)	
Transarterial Chemoembolization	20	13	
Sorafenib	4	3	
Sorafenib with TACE	3	0	
Ineffective or no therapy	24 (25%)	46 (64%)	

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Results (6) Survival



Proportion of screened individuals

Period	No yrs	Screened % (n)
'95-'01	7	48 (27)
'02-'05	4	52 (48)
'06-'08	3	53 (47)
'09-'12	4	71 (45)

0 1 2 3 4 5 6 7 8 9 10

At risk screen 95 26 18 8 4 3 2 2 1 1 0

At risk no screen 72 10 3 2 1 0

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Conclusions

- 43% of HIV/HCV infected individuals with HCC – not screened
 - ? Not attending clinic: 75% ART, 53% HIV RNA < 400 copies/ml
 - Late diagnosis of HCV or late assessment of liver disease
 - BUT we seem to be improving
- Screening is associated with better outcomes
 - Diagnosis at earlier stage
 - Improved underlying liver function
 - Smaller tumour size, less frequent metastases
 - Effective therapy
- Improved survival in those under surveillance programmes


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Thank you

To contribute your cases of HCC in HIV
please contact:

Liver Cancer in HIV Study Group:

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- www.HCCinHIV.org

The logo of the British HIV Association (BHIVA) is a circular emblem with a complex, geometric design. It features a central circle surrounded by concentric rings of smaller circles and lines, creating a sunburst or molecular-like appearance. The logo is positioned behind the main title text.

British HIV Association
BHIVA

A light blue map of the United Kingdom is visible in the background. A red circular marker is placed on the map, indicating the location of Manchester in the north-west of England. A thick vertical blue bar is on the left side of the slide.

19th Annual Conference of the British HIV Association (BHIVA)

16–19 April 2013

Manchester Central Convention Complex