

## Supplementary Tables

**Suppl. Table 1:**

Clinicopathological and radiological characteristics of the study cohort (2003-2011).

<b>Gender</b>	
male	75 (82%)
female	17 (18%)
<b>Median age (range)</b>	64 (24-84)
<b>Etiology</b>	
HBV	4 (4%)
HCV	10 (11%)
co-infection	4 (4%)
alcohol	24 (26%)
NASH	11 (12%)
cryptogenic	14 (15%)
genetic hemochromatosis	2 (2%)
co-morbidity	5 (5%)
others	4 (4%)
no known liver disease	14 (15%)
<b>Grading (n=65 HCCs)</b>	
well differentiated HCC	12 (18%)
moderately differentiated HCC	46 (71%)
poorly differentiated HCC	7 (11%)
<b>Tumor size (all focal lesions)</b>	
<1.0 cm	0 (0%)
< 2.0 cm	15 (16%)
≥ 2.0 cm	79 (84%)
< 3.0 cm	32 (34%)
2.0 – 5.0 cm	47 (50%)
> 5.0 cm	32 (34%)
<b>Macrovascular invasion (HCCs only)</b>	
present	8 (12%)
<b>Liver cirrhosis</b>	
present	60 (64%)
<b>Imaging modality</b>	
CT	70 (49%)
Conventional MRI	28 (20%)
Gd-EOB-DTPA-MRI	44 (31%)
<b>Arterial phase</b>	
Early arterial phase	72 (51%)
Late arterial phase	70 (49%)
<b>Li-RADS (142 observations)</b>	
LR-3	20 (14%)
LR-4	22 (15%)
LR-5	72 (51%)
LR-5V	13 (9%)
LR-M	15 (11%)
<b>Complication rate</b>	5% (5/99)
self-limiting small pneumothorax	2% (2/99)
small perihepatic hematoma	1% (1/99)
self-limiting hematuria	1% (1/99)
hemorrhagic shock (managed conservatively)	1% (1/99)
<b>Biopsy-related 30d mortality</b>	0%
<b>Needle tract seeding</b>	0% (as evident from the files)

**Suppl. Table 2:** False-negative non-invasive HCC diagnosis (For each imaging modality the number of false-negative diagnosis is related to the number of cases analyzed).

<b>Diagnosis</b>	<b>total</b> n= (%)	<b>CT</b> n= (%)	<b>Co-MRI</b> n= (%)	<b>EOB-DTPA-MRI</b> n= (%)	<b>LI-RADS</b>
No cirrhosis	3 (14%)	2/2 (100%)	1/2 (50%)	0/3 (0%)	LR4 (n=3)
Cirrhosis	19 (86%)	10/16 (63%)	4/4 (100%)	10/15 (67%)	LR3 (n=7), LR4 (n=3), LR5 (n=7), LR5V (n=2)

**Suppl. Table 3:** Comparison of LI-RADS and AASLD / EASL-EORTC algorithms

	<b>Sensitivity</b>	<b>Specificity</b>	<b>PPV</b>	<b>NPV</b>	<b>Accuracy</b>
<b>All imaging series (n=142)</b>					
LI-RADS	84%	48%	80%	54%	74%
AASLD / EASL-EORTC	74%	45%	77%	40%	65%
p-value	0.085	1.000	0.610	0.260	0.240
<b>CT only (n = 70)</b>					
LI-RADS	84%	60%	84%	60%	77%
AASLD / EASL-EORTC	76%	45%	78%	43%	67%
p-value	0.454	0.527	0.454	0.354	0.258
<b>Co-MRI only (n=28)</b>					
LI-RADS	95%	43%	83%	75%	82%
AASLD / EASL-EORTC	76%	71%	89%	50%	75%
p-value	0.184	0.592	0.685	0.580	0.746
<b>Gd-EOB-DTPA-MRI only (n = 44)</b>					
LI-RADS	77%	31%	73%	36%	64%
AASLD / EASL-EORTC	68%	31%	70%	29%	57%
p-value	0.570	1.000	1.000	1.000	0.663
<b>Algorithm &amp; Timing</b>					
Late arterial imaging (LI-RADS; n=70)	96%	50%	79%	86%	80%
Early arterial imaging (AASLD / EASL- EORTC; n=72)	64%	50%	82%	29%	61%
p-value	<b>&lt;0.001</b>	1.000	0.803	<b>&lt;0.001</b>	<b>0.017</b>