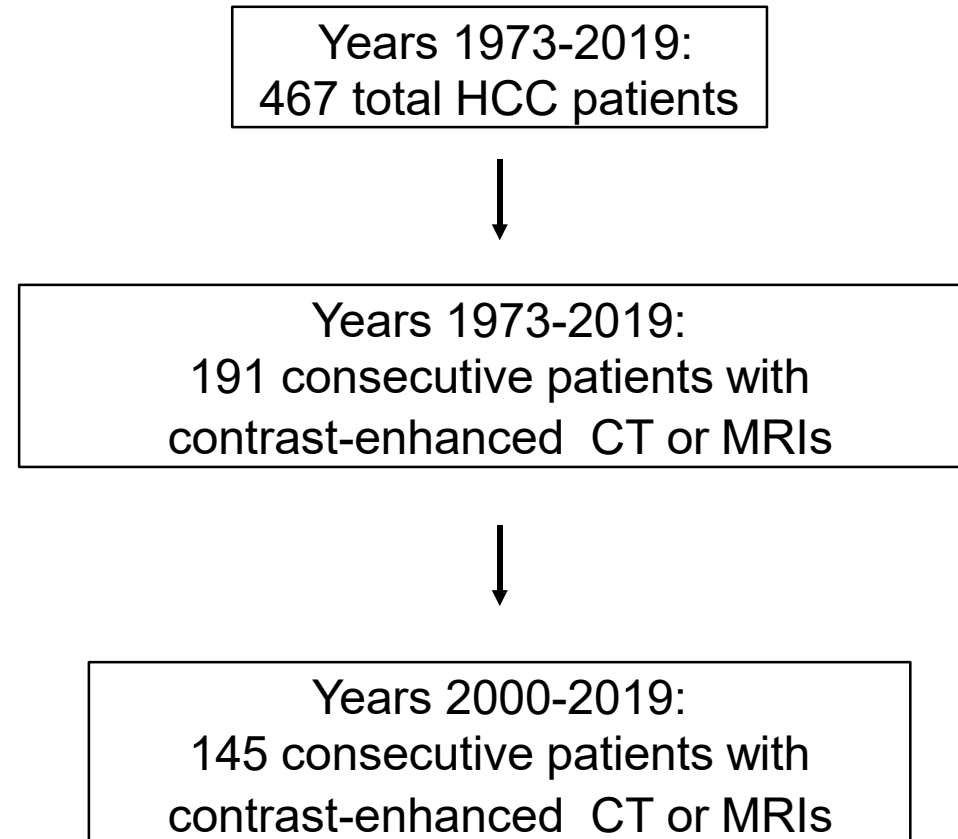


Supplemental figure 1- flow chart of study patient inclusion with associated years



Supplemental Table 1- Comparison of baseline characteristics between men and women in the NAFLD sub-cohort (n=47).

Baseline characteristic	Men (n=19)	Women (n=28)	P value
<i>Clinical</i>			
Mean age at HCC dx \pm SD	66.0 \pm 5.3	62.7 \pm 7.6	0.144
Median INR (IQR)	1.2 (1.1-1.3)	1.1 (1.1-1.3)	0.972
Median AST (IQR)	37.5 (28-55)	50.0 (39-65)	0.071
Median ALT (IQR)	32.0 (23-39)	31.0 (24-38)	0.858
Median albumin (IQR)	3.6 (3.3-4.4)	3.6 (3.1-3.9)	0.408
Median total bilirubin (IQR)	1.4 (0.9-2.3)	1.1 (0.7-2.4)	0.354
Median platelets (IQR)	94.0 (54-147)	98.5 (71-141)	0.965
Diabetes	13 (68.4)	22 (78.6)	0.434
Encephalopathy	5 (26.3)	6 (21.4)	0.698
Ascites	7 (36.8)	11 (39.3)	0.866
Family history HCC	0 (0)	2 (7.1)	0.234
Family history LD	4 (21.1)	12 (42.9)	0.122
Child-Pugh Score A	8 (42.1)	15 (60.0)	0.071
Child-Pugh Score B	11 (57.9)	7 (28.0)	
Child-Pugh Score C	0 (0)	3 (12.0)	
<i>HCC</i>			
Surveillance, n (%)	14 (73.7)	14 (50)	0.104
OLT	8 (42.1)	12 (42.9)	0.889
Resection	0 (0)	1 (3.6)	
RFA	6 (31.6)	8 (28.6)	
TACE	1 (5.3)	2 (7.1)	
Chemotherapy	2 (10.5)	1 (3.6)	
Supportive care	2 (10.5)	3 (10.7)	
Median initial tumor size (IQR)	2.3 (1.7-3.3)	2.4 (1.8-2.9)	0.854
Within Milan, n (%)	15 (79)	27 (96.4)	0.057

HCC: hepatocellular carcinoma; Dx: diagnosis; LD: liver disease; OLT= orthotopic liver transplantation; RFA: radiofrequency ablation; TACE: trans-arterial chemoembolization

Supplemental table 2- Comparisons of TGR according to the initial tumor size stratified by the etiology of HCC (n=145).

Tumor size (cm)	N	Median % TGR	IQR	P value
<i>HBV</i>				
Unknown	1	--	--	0.390
1-3	23	8.4	1.7-16.4	
3-5	9	6.1	3.8-13.7	
5-10	3	2.7	-0.2-8	
>10	2	2.6	2.6-3	
<i>HCV</i>				
Unknown	1	--	--	0.368
1-3	39	6.1	2.5-12.3	
3-5	16	3.4	0.5-7.5	
5-10	5	8	0.3-16.2	
>10	None	None	--	
<i>NAFLD</i>				
Unknown	1	--	--	0.369
1-3	3	3.8	1.5-11.3	
3-5	9	5.4	-2.2-14.6	
5-10	3	3.4	0.8-5.6	
>10	1	-10.1	--	

Supplemental table 3- Hazard ratios of overall mortality based on TGR growth rate by etiology and treatment modality in 145 patients from 2000-2019.

Hazard Ratios of Mortality according to TGR categories based on the tree model by Etiology

<i>Etiology</i>	<i>node</i>	<i>TGR</i>	<i>n</i>	<i>HR</i>	<i>95% CI</i>	<i>p-value</i>
NALFD	1+2	low	33	1.000	1.000	--
NAFLD	3+4	medium	10	0.368	0.047-2.910	0.343
NAFLD	5	fast	4	3.559	0.953-13.283	0.059
Hep B + C	1+2	low	65	1.000	1.000	--
Hep B + C	3+4	medium	28	1.427	0.800-2.544	0.228
Hep B + C	5	fast	5	7.108	2.634-19.180	0.000

Hazard Ratios of Mortality according to TGR categories based on the tree model by Treatment

<i>Treatment</i>	<i>node</i>	<i>TGR</i>	<i>n</i>	<i>HR</i>	<i>95% CI</i>	<i>p-value</i>
OLT	1+2	low	24	1.000	1.000	--
OLT	3+4	medium	12	0.334	0.040-2.779	0.310
OLT	5	fast	3	4.931	0.953-25.521	0.057
RFA, Resection, TACE	1+2	low	56	1.000	1.000	--
RFA, Resection, TACE	3+4	medium	16	2.740	1.323-5.676	0.007
RFA, Resection, TACE	5	fast	3	7.408	2.091-26.246	0.002