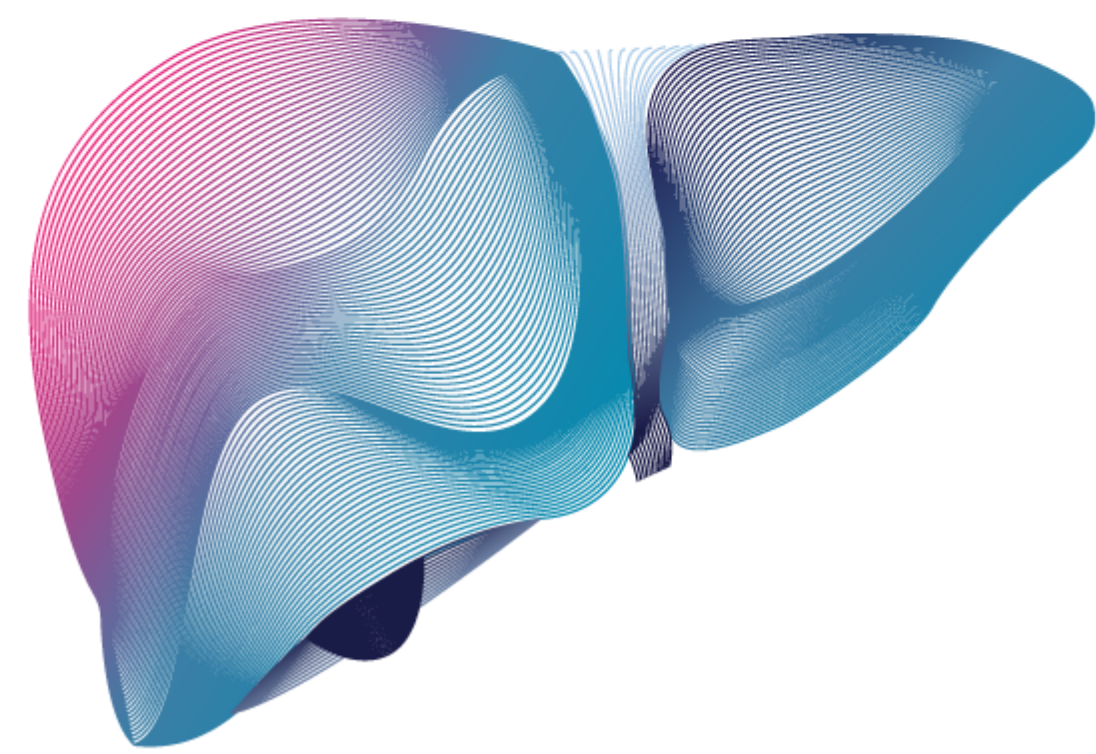




LIVER TUMOURS: THERAPY
THU-136

Introduction

There are scarce data in the literature about liver resection of hepatocellular carcinoma (HCC) in non-cirrhotic patients.

Aim

HYPOTHESIS: The characteristics of patients with HCC without cirrhosis could have an impact on staging at diagnosis, the feasibility of surgical treatment, surgical outcomes and survival.

OBJECTIVES: **1)** Describe BCLC staging system and the percentage of patients treated with surgery. **2)** Characterize patients with HCC without cirrhosis treated with surgery. **3)** Evaluate the outcomes of surgery: complications, types of recurrence, sequential therapies and survival. **4)** Analyze predictors of recurrence and survival in this group.

Method

- **A prospective Spanish multicenter study:** 23 centers, 6 of them with liver transplantation (LT).
- **Inclusion period:** May 2018-October 2022.Follow-up **UPDATED** until February 2023.
- **One hundred and forty-one non-cirrhotic patients with HCC** diagnosed by histology were included in registry.
- **Surgical resection was performed in 90 patients (63.8%).** Liver cirrhosis was excluded by histology.
- Patients´ baseline characteristics, surgery characteristics, evolution. Toxic / diet / exercise lifestyle survey (n=67/90).

Conclusions

- In this multicenter series, with prospective data on HCC without cirrhosis, 70% of patients were diagnosed at an early stage (0-A), despite the lack of screening, and 64% were treated by surgery.
- NAFLD was the main cause of chronic liver disease. Prevention of NAFLD is essential.
- One third received sequential therapy to treat tumor recurrence, more than half with curative intention (surgery, LT or ablative therapy).
- Our study shows that surgical resection for HCC in non-cirrhotic liver is a reasonable therapeutic approach, with good results even in extensive tumors. However, the selection of candidates must be accurate and the surgery must meet quality criteria.

References

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Surgical resection of hepatocellular carcinoma has high feasibility, safety and survival in non-cirrhotic liver: A prospective Spanish multicenter study.

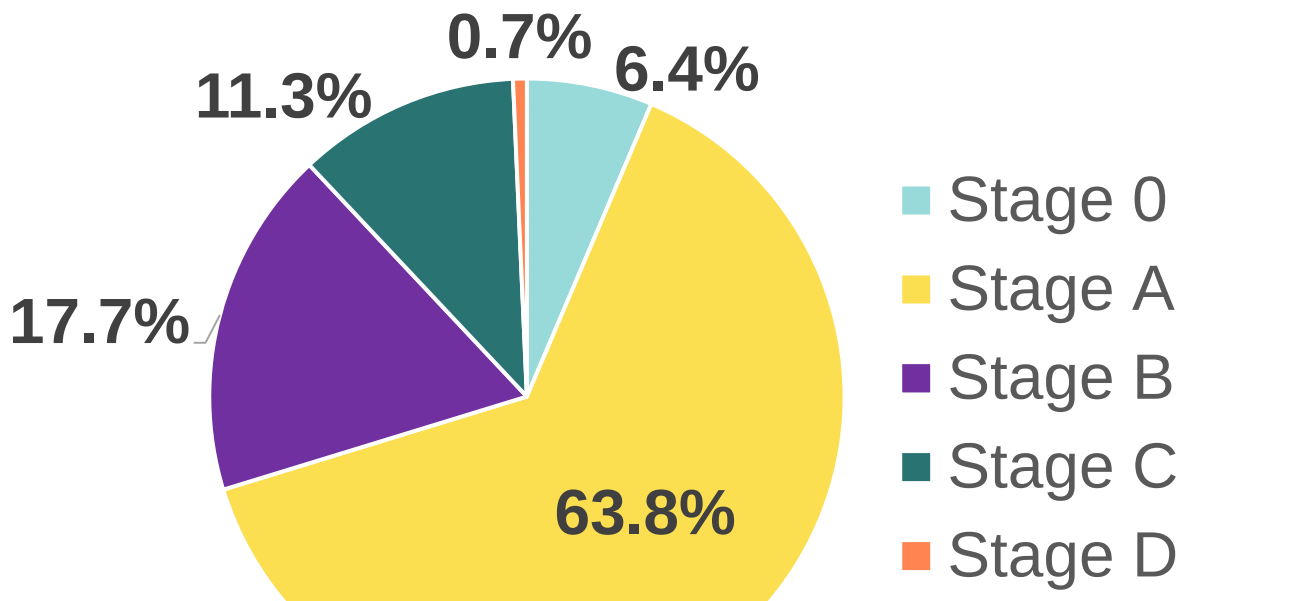
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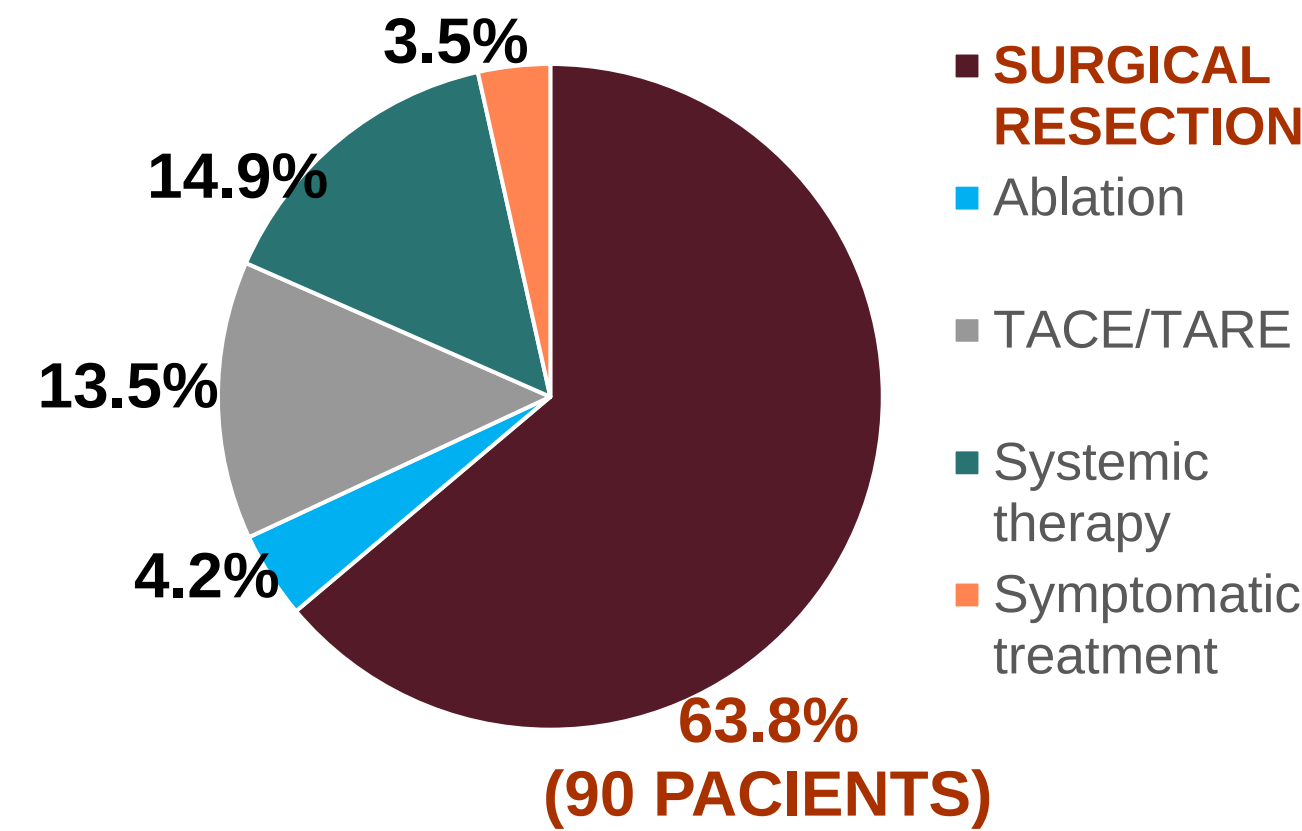
Results

OBJETIVE 1. BCLC and treatments (n=141). **OBJETIVE 2.** Characterize patients with HCC without cirrhosis treated with surgery (n=90)

BCLC staging system



Initial treatment



Patients´ baseline characteristics:

Age (years) median and range	70.4 (31-86)
Male	83.3%
BMI (kg/m2) median and range	26 (17-46)
Arterial hypertension	56.7%
Diabetes mellitus	35.6%
Fibrosis 0, without liver disease	20%
Underlying liver disease:	80%
NAFLD +/- alcohol	26.7%
HCV +/- alcohol	17.7%
HBV	7.8%
Alcohol	14.6%
Others	8.8%
Unknown	3.3%

Patients´ baseline characteristics:

Coffee drinkers (n=67) Yes / No	75.8% / 24.2%
Exercise (n=67) Yes / No	55.2% / 44.8%
Toxics:	
- No smoker/smoker/Past smoker	27.9%/24.4%/44.6%
- No drinker/drinker/Past drinker	52.2%/41.1%/3.3%
Other cancers	25.6%
Fibrosis stage:	
- F0-F1	57.8%
- F2	20%
- F3	18.9%
- Unknown	3.3%
PAGE B low risk group	0%
aMAP:	
- Low risk group	14.1%
- Intermediate-risk group	48.9%
- High risk group	36.7%

Tumor features:

HCC diagnosis:	
- Follow-up ultrasonography	23.3%
- Casual	56.7%
- Symptoms	20%
Single nodule	85.6%
Size (mm) median and range	49 (10-190)
Differentiation degree:	
- Well-differentiated	29%
- Moderately differentiated	61.1%
- Poorly differentiated	4.4%
- Undifferentiated	1.1%
- Others	4.4%
AFP (ng/mL) median and range	3.6 (0.9-24868)
BCLC staging system:	
- Stage 0	8%
- Stage A	80%
- Stage B	10%
- Stage C	2%

OBJETIVE 3. Surgery outcomes (n=90) Median follow-up was 34,8 meses (IQR 23-49).

Surgery characteristics	
Prior TACE/TAE	7.8%
Surgical resection	85.7%
- Anatomical	39.6%
* Laparoscopy	46.1%
* Laparotomy	14.3%
- Non-anatomical	1.1%
* Laparoscopy	13.2%
* Laparotomy	13.2%
Major liver resection (≥ 3 segments)	22.5%
Pringle maneuver	46.2%
Intraoperative transfusion	18%
ASA physical status classification system	
- 1-2	57.5%
- 3-4	42.5%
Days of hospitalization (median and range)	6 (2-40)
Thirty-Day hospital readmissions	6.7%

Surgical pathology	
- Satellitosis	7.7%
- Microvascular invasión	25.3%
- Capsule	36.3%
- >1 nodule in surgical pathology	16.7%

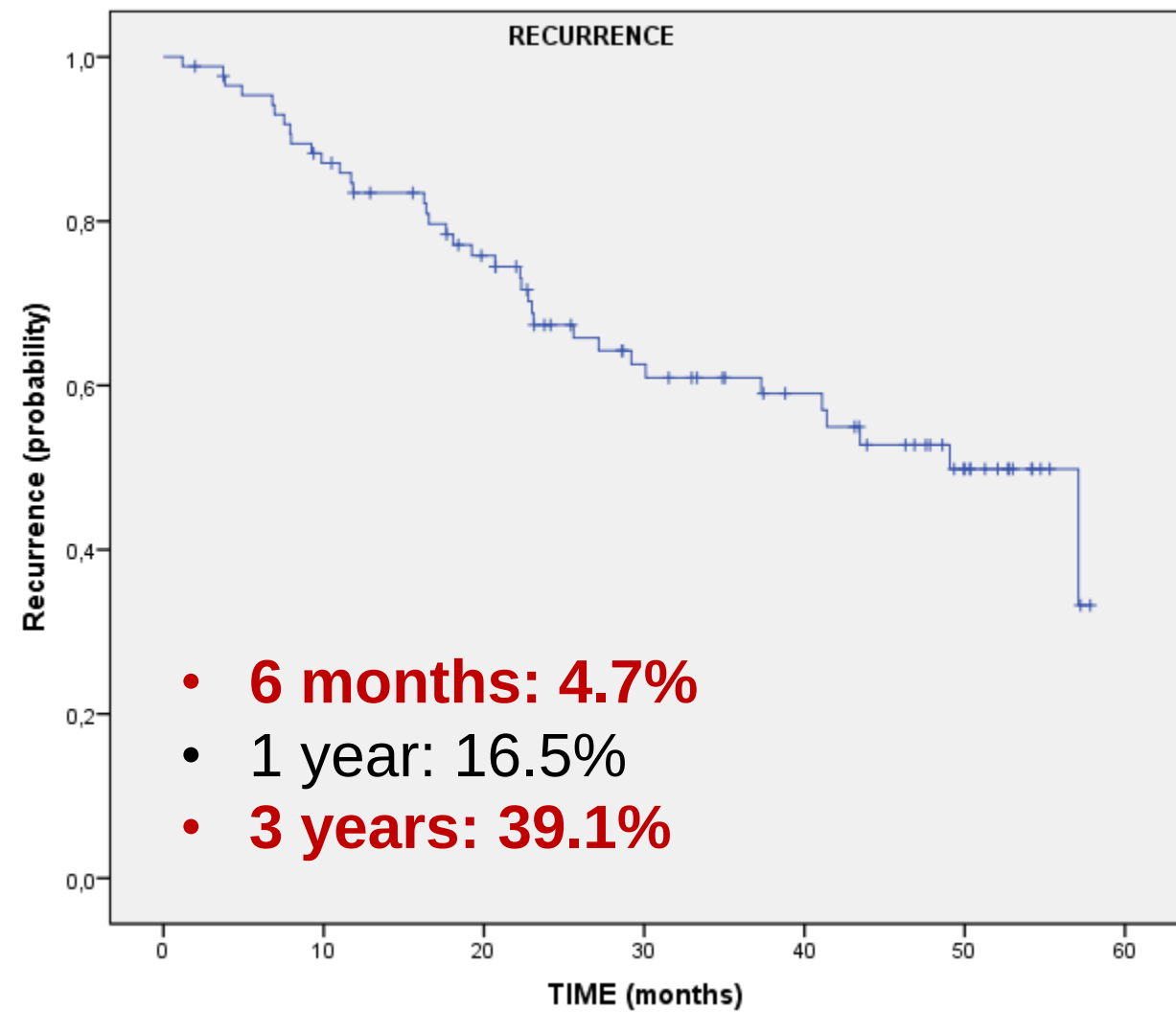
Postoperative complications: 16 pacientes (17.7%).

- **Clavien Dindo I-III:** 11 pacientes (12.2%):
 - Post surgical abscess: 6 events.
 - Hematoma/dehiscence/seroma: 4 events.
 - Bowel obstruction: 1 event.
- **Clavien Dindo IV y V:** 5 pacientes (5.5%):
 - IV: 3 resolved events (3.3%)
 - Liver failure.
 - Infectious complication.
 - Infectious complication + biliary.
 - V: 2 events of **perioperative mortality (2.2%).**

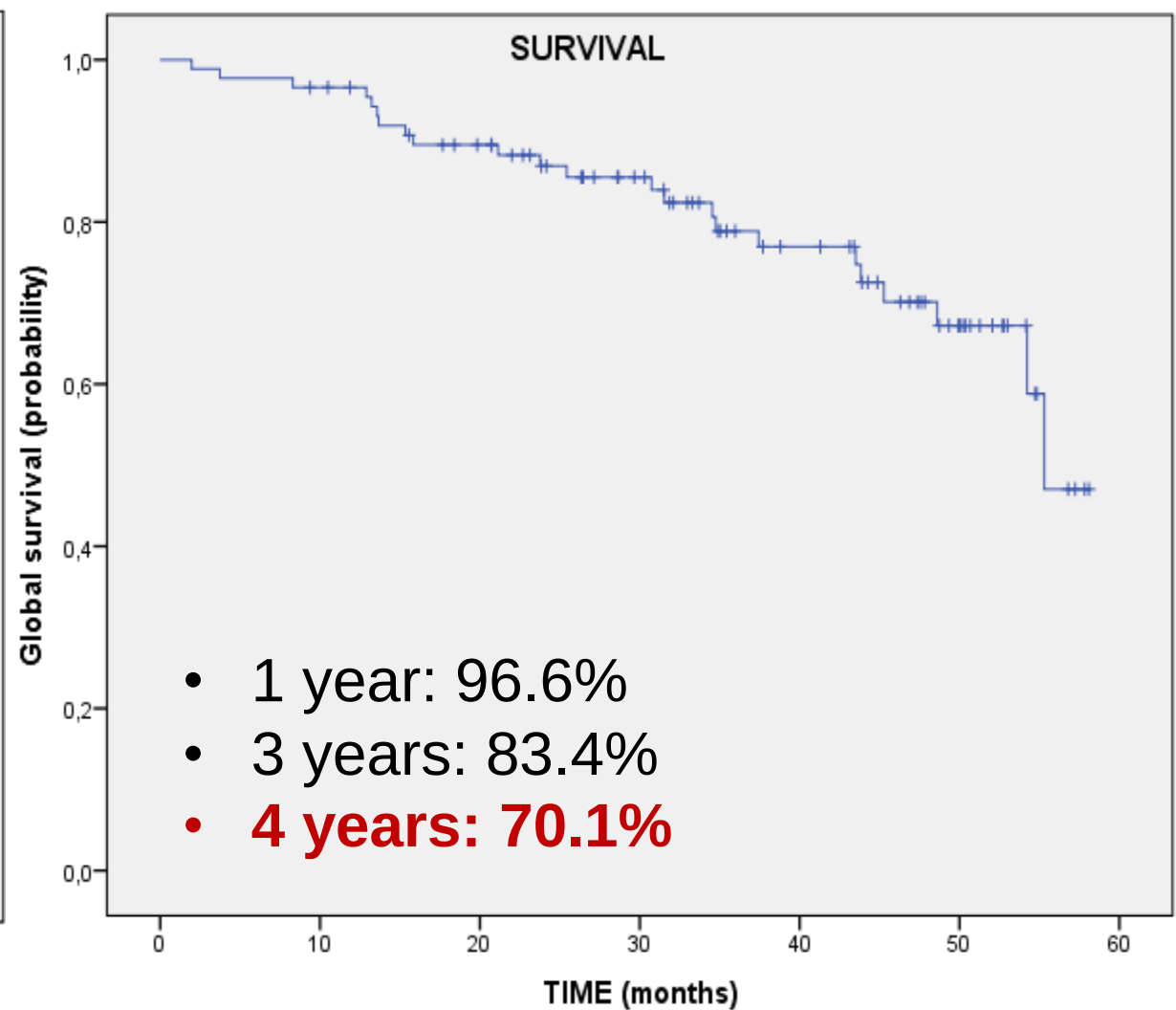
OBJETIVE 4. Analyze predictors of recurrence and survival (n=90)

RECURRENCE		UNIVARIATE ANALYSIS		MULTIVARIATE ANALYSIS		
VARIABLE	HR	p	HR	IC 95%	p	
AFP (ng/mL)	1	0.004	1	1.00003-1.0002	0.009	
VARIABLE	3-YEAR RECURRENCE	p	HR	IC 95%	p	
High risk of recurrence (microvascular invasion and/or satellitosis) NO / YES	34.5% / 51.4%	0.04	0.84	0.29-2.43	0.75	
Satellitosis NO / YES	36.5% / 80%	0.0003	0.27	0.05-1.41	0.12	
>1 nodule in pathological study NO / YES	36% / 65.7%	0.014	0.63	0.2-1.98	0.43	

Median time to relapse: 49months
IC 95% 40.4-57.7).



Median overall survival: 55.3 months.



RECURRENCE: 40% (36 patients).

SEQUENTIAL THERAPY: 34.5% (31 patients).

- Surgery: 8 patients (2 LT, 6 resection).
- Ablation: 5 patients.
- TACE: 6 patients.
- Others: 1 SBRT/1metastasis resection.
- Systemic therapy: 10 patients→ 50% more than one line.

SURVIVAL	UNIVARIATE ANALYSIS		MULTIVARIATE ANALYSIS (All-causes)			MULTIVARIATE ANALYSIS (Liver-related causes)		
VARIABLE	3-YEARS SURVIVAL	p	HR	IC 95%	p	HR	IC 95%	p
Differentiation degree • Well+moderate • Poor+undifferentiated	85% 40%	0.014	0.25	0.06-1.13	0.07	0.31	0.43-2.27	0.25
Microvascular invasion • Yes • No	56% 86%	0.013	0.28	0.1-0.76	0.013	0.21	0.06-0.7	0.011
Transplant Center • Yes • No	94% 69%	0.026	7.04	1.54- 32.13	0.012	6.11	0.84- 44.22	0.73
Exercise • Yes • No	93% 62%	0.004	3.3	0.99-11.1	0.052	3.9	0.79- 19.34	0.95