



# SBRT IN PATIENTS WITH HCC NOT CANDIDATES FOR SURGERY: ONCOLOGICAL RESULTS AT THE NATIONAL INSTITUTE OF MEDICAL SCIENCES AND NUTRITION SALVADOR ZUBIRÁN IN MEXICO

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## Introduction:

Hepatocellular carcinoma (HCC) is a neoplasm with high mortality rates. Eighty percent of patients are not surgical candidates. SBRT has shown promising results.

## Objective:

To evaluate the oncological outcomes of patients with hepatocellular carcinoma treated with SBRT.

## Materials and Methods:

Retrospective review of patients treated with SBRT. Inclusion criteria: Unresectable HCC, Karnofsky score >60, any clinical stage, Child-Pugh score ≤8, and an unaffected liver volume >700 cm<sup>3</sup>. Primary Endpoint: Local control. Secondary Endpoints: Overall survival and progression-free survival. Acute adverse events.

Table 1. Population Characteristics of HCC patients + SBRT at INCMNSZ.

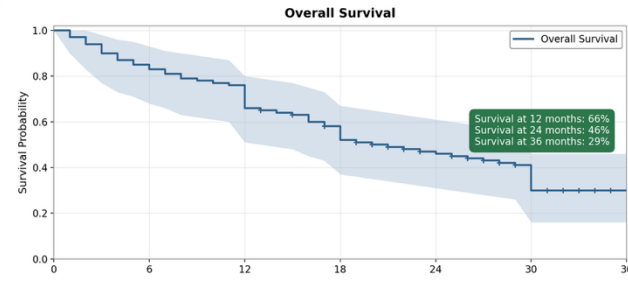
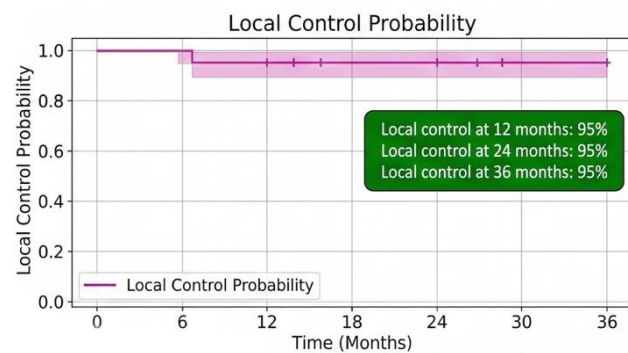
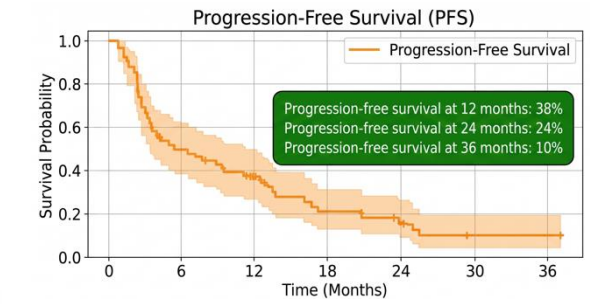
Characteristic	N=29
Age at diagnosis	Median 65 RIQ 58-75
<b>Sex</b>	
	(%)
Female	15 (51.7)
Male	14 (48.3)
<b>ECOG PS / Liver function</b>	
	(%)
0	2 (6.9)
1	23 (79.3)
2	4 (13.8)
Median MELD Na (pre SBRT)	11 (8-12)
<b>ALBI Grade Pre SBRT</b>	
	(%)
1	9 (31.0)
2A	6 (20.7)
2B	13 (44.8)
3	1 (3.5)
<b>BCLC Stage pre SBRT</b>	
	(%)
A	16 (55.2)
B	8 (27.6)
C	5 (17.2)
<b>Child-Pugh Class</b>	
	(%)
A	18 (62.1)
B	8 (27.6)
N/A	3 (10.3)
Tumor diameter (cm)	Median 4.7 RIQ 2-6.3

## Results:

From January 2019 to June 2025, 29 patients with hepatocellular carcinoma treated with SBRT were recruited at the INCMNSZ. All patients underwent SBRT on the Varian Truebeam V2.5 linear accelerator (Varian Medical Systems/Siemens Healthcare) and were positioned using the Qfix Stradivarius fixation system with abdominal compression.

Table 2. Target coverage for HCC SBRT (50 Gy/5 fx).

Volume	Objective
PTV coverage	95% 48 Gy
PTV Dmax	$D_{max} \leq D_{PTV}/0.75$ , ( $\leq 133\%$ )
GTV coverage	95% 54 Gy



## Conclusion:

The results of this study demonstrated that SBRT achieved excellent local control of HCC in a selected population.

