



# Wide versus Narrow Margins after Partial Hepatectomy for Hepatocellular Carcinoma

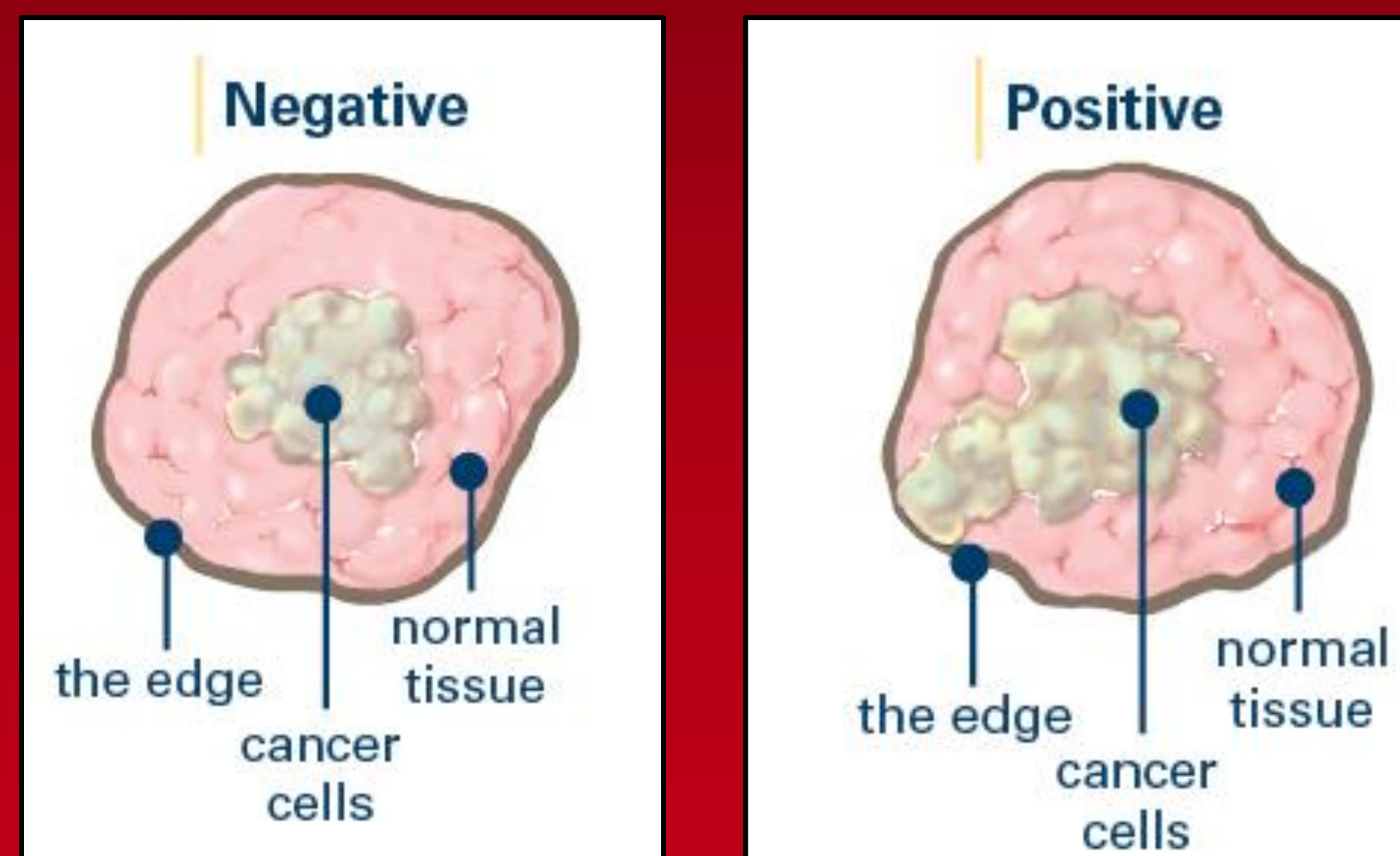
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## Introduction

- Despite extensive investigation, the optimal balance between oncological results and preserving parenchyma after resection of hepatocellular carcinoma (HCC) has not been clearly elucidated.
- The goal of this study was to compare the outcome after partial hepatectomy for HCC in which a margin less than or equal to 5 mm or greater than 5mm was achieved.

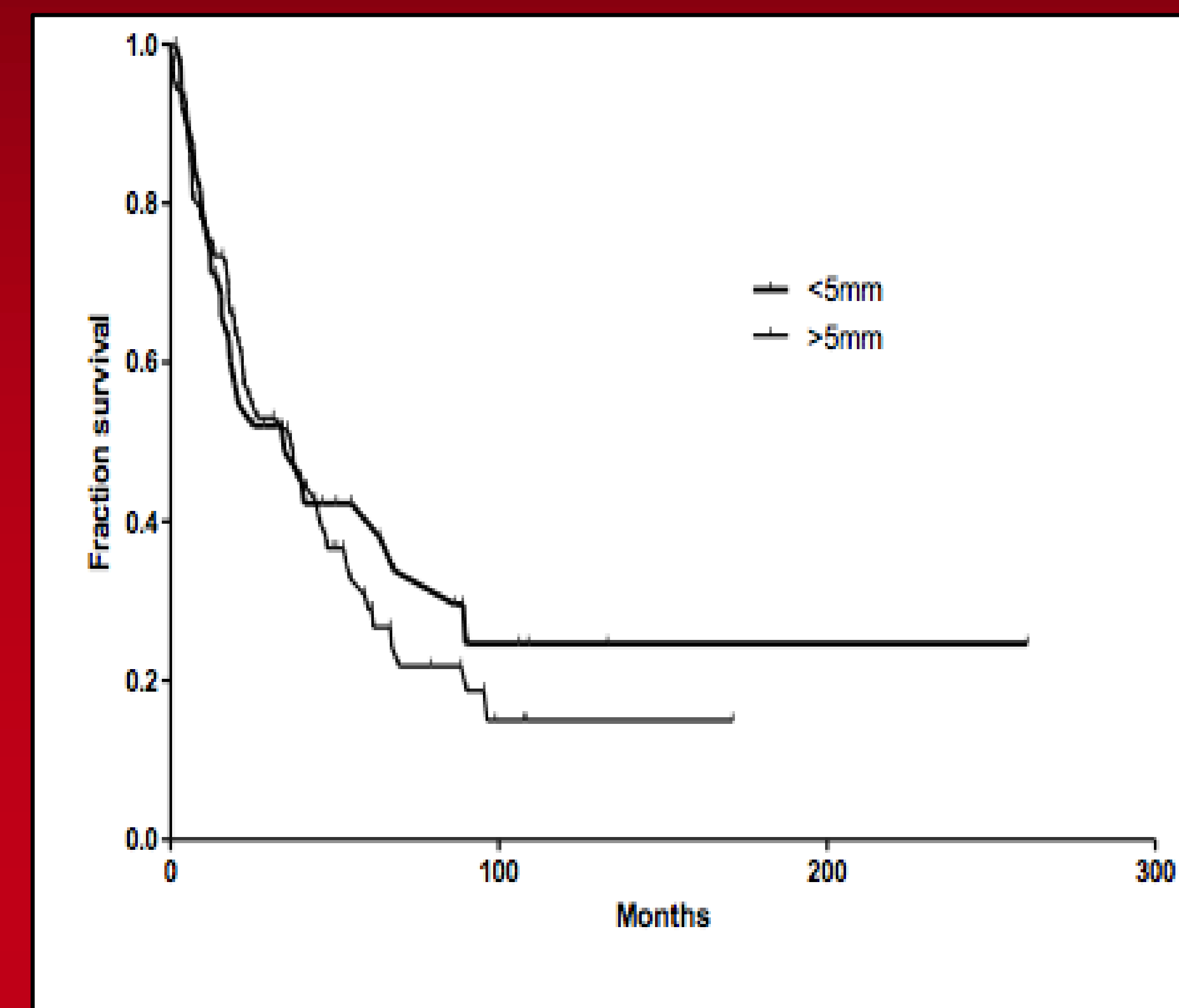
## Positive vs. Negative Margin



## Results: Follow-up

Variable	Margin Status		p
	≤ 5 mm	> 5 mm	
<b>Timing of Recurrence:</b>			
Recurrence at time of analysis, n (% total)	15 (37)	41 (46)	0.45
<1 year from resection, n (%)	9 (60)	23 (56)	1
1-2 years from resection, n (%)	3 (20)	7 (17)	1
>2 years from resection, n (%)	3(20)	11 (27)	0.73
<b>Characteristics of recurrence</b>			
Intrahepatic, n(%)	11 (79)	30 (75)	1
Extra-hepatic, n (%)	6 (43)	17 (43)	1
Median recurrence free survival, months	18.1	19.5	0.85
Tumor-free survival at censorship, n (%)	13 (32)	19 (21)	0.27
Median overall survival, months	34.7	37.2	0.68

## Overall Survival



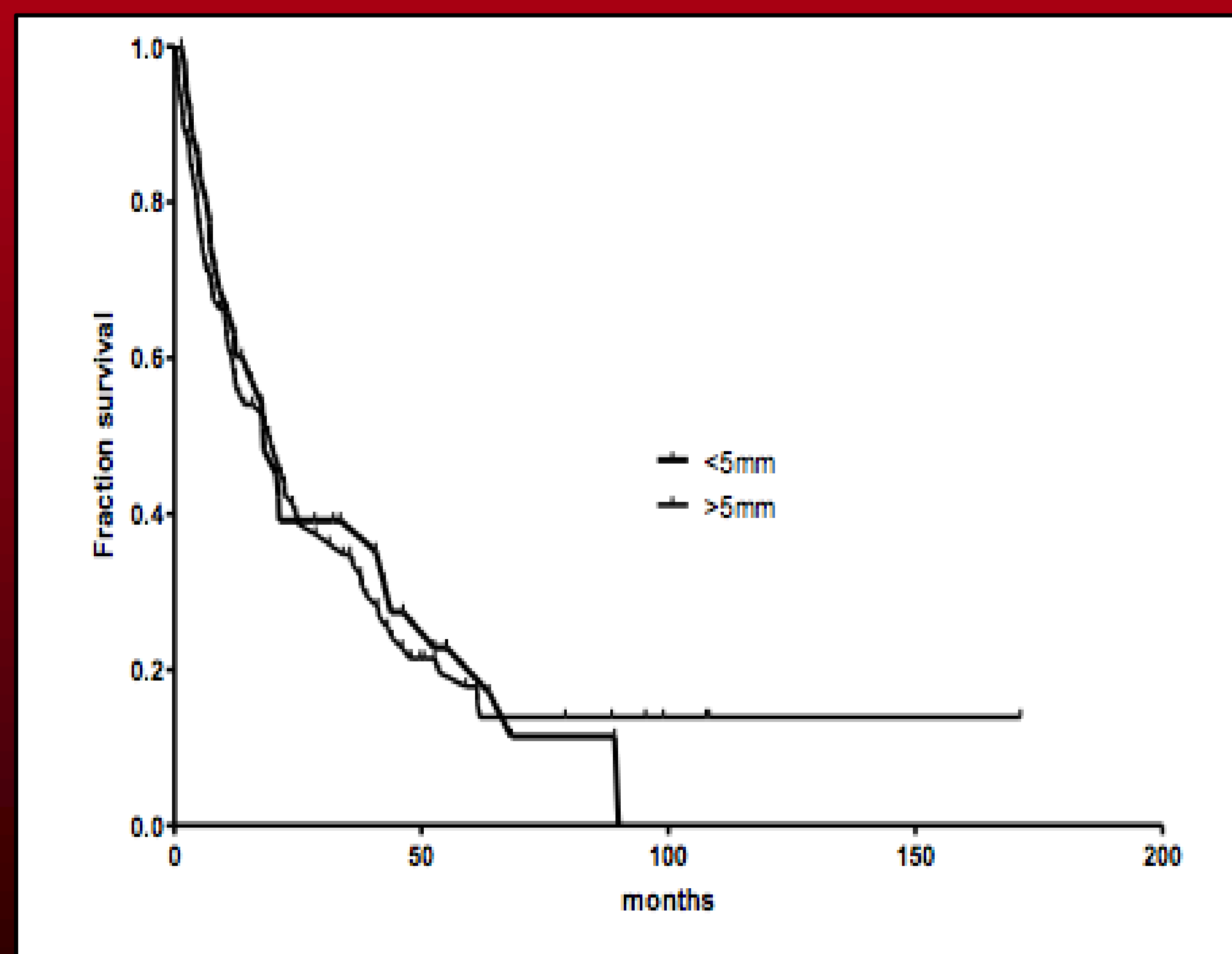
## Methods

- A review of our prospective 2455 patient Hepato-Pancreatico-Biliary database was performed on all patients undergoing primary resection of HCC at a single center from December 2002 to April 2015.
- Patients were stratified into resection margins 5mm or less (“narrow”) and those greater than 5mm (“wide”).
- Primary outcome was patterns of recurrence and disease free survival (DFS)
- Unpaired t-test was used to determine if each subsequent stratification was statistically significant, with alpha set at 0.05.

## Results: Baseline and Operative

Variable	Margin Status		p
	≤ 5 mm	> 5 mm	
Patients Enrolled, n	41	89	
<b>Disease characteristics:</b>			
Number of lesions per patient, median (range)	1 (1-20)	1 (1-10)	
Mean largest tumor size, cm (SD)	9.0 (5.6)	7.3 (4.3)	0.05
Mean resection margin, mm (SD)	2.3 (1.7)	18.0 (11.8)	0.0001*
Positive margins on final histology, n (%)	8 (19.5)	0 (0)	0.0001*
<b>Procedure:</b>			
Operative Time, median minutes (range)	145 (50)	125 (72)	0.09
Blood loss, mean mL (SD)	669.2 (903)	236.9 (314)	0.003*
Blood transfusion, n (%)	18 (44)	25 (27)	0.55
Length of stay, median days (range)	7 (3-22)	6 (2-32)	0.98

## Disease-free Survival



## Conclusions

- A narrow resection margin (5mm or less) does not detract from the oncologic outcomes after partial hepatectomy for HCC.
- Tailoring resection margins may lead to greater preservation of hepatic parenchyma.
- Factors other than margin status represent the driving forces for local and systemic recurrence.

## Acknowledgements

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