

Survival and Prognostic Factors in Advanced Hepatocellular Carcinomas (HCCs) of 10cm or Above Treated with Combined Trans-arterial Chemo-embolization (TACE) and Stereotactic Body Radiotherapy (SBRT)

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INTRODUCTION

- Huge ($\geq 10\text{cm}$) HCCs carry dismal prognoses
- TACE is ineffective with a 0% 2-year survival
- Emerging data supports the potential synergistic effects of TACE and SBRT

OBJECTIVE

- To evaluate the safety & efficacy of combination TACE + SBRT among huge unresectable tumors $\geq 10\text{cm}$
- To report the predictors of overall survival (OS)

PATIENTS & METHODS

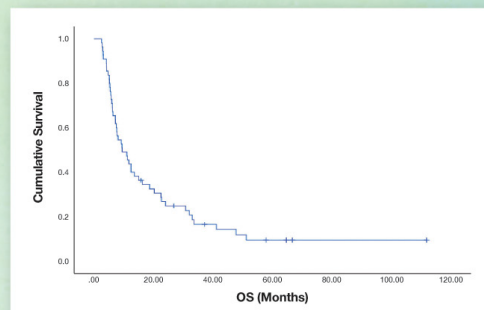
- 55 consecutive patients receiving liver SBRT during 2007 – 2017 were included
- Eligibility criteria
 - Unresectable HCC $\geq 10\text{cm}$ ineligible for curative interventions (by MDT)
 - CP score A5 to B7
 - ECOG performance status 0-2
 - Liver volume minus GTV $\geq 700\text{ml}$
 - Number of lesions ≤ 5
 - Adequate organ functions
- Primary endpoint: OS
- Secondary endpoints: Local control (LC), clinical benefit rate, toxicities, prognostic factors of OS

TREATMENT

- Median SBRT Dose, EQD₂ $\alpha/\beta = 10$: 32.7Gy
- Dose Range: 28-46.7Gy
- Subsequent Treatment:
 - Resection 10 (18.2%)
 - Targeted therapy 26 (47.3%)
 - Chemotherapy 4 (7.2%)
 - Immunotherapy 3 (5.5%)
 - Nil 12 (21.8%)

RESULTS

- Patient characteristics
 - Median Age: 57 (37-82)
 - Sex: M/F = 9:1
 - Hepatitis B: 86%
 - ECOG 0-1: 96%
 - CP: A5-6 = 87%, B7 = 13%
- Tumour Characteristics
 - BCLC: A 29%, B 20%, C 51%
 - Vascular invasion: 26%
 - Extra-hepatic met: 33%
- AFP Level
 - Median: 2429
 - Range: 2.2 – 333937
- Lesion no.: 1 = 58%, 2 = 11%, 3-5 = 31%
- Tumour Size:
 - Median: 15.3 cm
 - Range: 10.0 – 25.7 cm

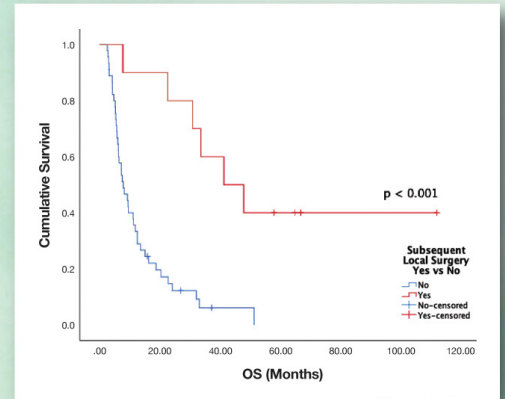


Overall Survival

OS	% (95% CI)
1-year rate	43.6 (30.5–56.7)
2-year rate	24.9 (13.4–36.4)

CONCLUSION

- TACE + SBRT achieved favorable survival outcomes among huge, advanced HCCs with low toxicity
- AFP level & subsequent local treatment were independent survival predictors
- There was a trend towards responders achieving better survival
- Future prospective trials are warranted to determine its optimal integration to local and systemic therapies



OS Comparison of (subsequent local surgery vs no surgery)

	No of pts (%)
Total No with surgery done	10 (18.2)
Pathological CR (pCR)	2
R0 resection	9
mOS, months	41.2

- 1-year LC rate near 60%
- **High clinical benefit rate (83.6%)**
- **AFP $\geq 400\text{ng/ml}$ ($p=0.025$) and subsequent local treatment ($p=0.001$)** were independent OS predictors by multivariate analysis
- **Excellent treatment completion rate at 94.5%**
- Minimal severe (\geq Grade 3) toxicities (most common: anemia, 7.3%)