Real world treatment patterns and outcomes for hepatocellular carcinoma (HCC) patients receiving transarterial chemoembolization (TACE) or transarterial radioembolization (TARE) in the TARGET-HCC registry

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Background

- Most unresectable HCC patients are considered advanced stage with Barcelona Clinical Liver Cancer (BCLC) stage C disease, but some are also considered intermediate stage patients with BCLC B disease.
- Treatment patterns and baseline therapies and systemic therapies are possible treatment options. characteristics among intermediate HCC patients can be heterogeneous, with most being treated with locoregional therapies like transarterial chemoembolization (TACE) and transarterial radioembolization (TARE), but some also being treated with systemic therapies. A better understanding of real-world treatment patterns among HCC patients treated with TACE or TARE may inform care when both locoregional

Objectives

Describe baseline characteristics, treatment patterns, and outcomes among patients with intermediate or advanced HCC receiving TACE or TARE as their first treatment in a real-world setting.

Methods

- A retrospective cohort study was conducted using the TARGET-HCC database¹, a real-world longitudinal observational cohort of patients enrolled across academic and community sites in the US.
- Patients with a histologic or radiologic definition of HCC are enrolled at a participating center specializing in gastroenterology, hepatology, hepatobiliary or transplant surgery, radiation oncology, interventional radiology, or medical oncology.
- Medical records are collected retrospectively for up to 3 years before enrollment and prospectively for up to 5 years.
- Data used was from January 2017 through July 2024 (study
- period).
- Adults > 18 years diagnosed with HCC BCLC stage B or C within 3 years of enrollment receiving TACE or TARE as first treatment were eligible for this study.
- Evaluated outcomes included:
 - Real-world tumor response to TACE or TARE based on radiology reports or clinical notes
 - Real-world overall survival
 - TACE or TARE unsuitability defined by tumor size, portal vein thrombosis, extrahepatic metastases or liver dysfunction (Table
- Sankey plots were used to display treatment patterns.
- Survival analyses stratified by first response evaluation and most common response patterns after first and second round of TACE or TARE were performed, respectively, using Kaplan-Meier analyses.

Results

Table 1. Patient Demographics at Diagnosis

	BCLC B (n=163)	BCLC C (n=67)	Overall (n=230)
Age			
Median, years (range)	64 (46 - 84)	64 (49 - 83)	64 (46 - 84)
< 65 years, n (%)	88 (54)	35 (52)	123 (53)
≥ 65 years, n (%)	75 (46)	32 (48)	107 (47)
Male, n (%)	144 (88)	50 (75)	194 (84)
Race: White, n (%)	106 (65)	47 (70)	153 (67)
Ethnicity: Hispanic/Latino, n (%)	17 (10)	5 (8)	22 (10)
Child Pugh class, n (%)			
A	115 (71)	42 (63)	157 (68)
В	45 (28)	15 (22)	60 (26)
Unknown	3 (2)	10 (15)	13 (6)
Viral etiology, n (%)			
Hepatitis B	43 (26)	10 (15)	53 (23)
Hepatitis C	96 (59)	39 (58)	135 (59)
Unknown	15 (9)	6 (9)	21 (9)
Median follow-up, years (range)	3 (0.5 - 8.5)	2 (0.4 - 6.7)	3 (0.4 - 8.5)



Figure 2. Overall survival from diagnosis date among patients with two or more rounds of TACE or TARE



Table 2. Definition of TACE/TARE Unsuitability

	TACE/TARE Unsuitability
Tumor Size	Portal Vein Tu
 Exceeding UNOS-DS (downstaging criteria) 1 HCC lesion >8cm OR 2 to 3 HCC lesions, largest >5cm OR 4 to 5 HCC lesions, largest >3 cm OR Sum of the maximal tumor diameters >8cm 	Large vesse vein tumor t hepatic vein
Tumor Appearance	Extrahepatic
Infiltrative	
Liver Function	Deteriorating
 mALBI 2b or 3 	 Assessed b points or mo

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Figure 1. Overall survival from diagnosis date by response evaluation after first rounds

umor Thrombosis (PVTT)

el vascular invasion, e.g. main PVTT or hepatic hrombus (i.e. macular invasion of the port or

metastases

liver function over time

y worsening of Child Pugh score increase by 2 ore OR worsening of mALBI grade

Figure 3. Treatment patterns for BCLC stage B and C patients receiving **TACE or TARE as first treatment for HCC**



Results (cont.)

- Latino
- respectively).
- underwent surgical resection.

- TARE, and 69% after the second round.
- round.

Limitations

observational review

Conclusions

- treatment in a real-world setting.
- of these patients received systemic therapy.

References: ¹Cabrera, Roniel, et al. "A Real-World Observational Cohort of Patients with Hepatocellular Carcinoma: Design and Rationale for TARGET-HCC." *Hepatology communications* 5.3 (2021): 538-547.

Acknowledgements and Disclosures: Target RWE communities are collaborations among academic & community investigators, the pharmaceutical industry and patient community advocates. Target RWE communities are sponsored by TARGET PharmaSolutions Inc (d.b.a., Target RWE). The authors would like to thank all the investigators, participants, and research staff associated with TARGET-HCC. ClinicalTrials.gov Identifier: NCT02954094. This project was funded by Genentech.



Ablation Liver transplant TACE TARE Other Embolization Radiation Systemic therapy Death Censored No more therapies

• Of 230 eligible patients, most had stage (BCLC) B HCC at diagnosis (71%), median age was 64 years, most were White (67%), and 10% were Hispanic or

• Among response-evaluable patients after the first round of TACE or TARE, the most common response was partial response (PR, 57%), followed by progressive disease PD, 21%), complete response (CR, 13%) and stable disease (SD, 9%,

• Among response-evaluable patients across two rounds of TACE or TARE, the most common response pattern was CR/PR – CR/PR (52%), followed by CR/PR – SD/PD (21%), SD/PD – SD/PD (14%), and SD/PD – CR/PR (12%).

• After initial TACE or TARE treatments, 49% of patients in this cohort were at some point subsequently treated with systemic therapy, 21% were at some point subsequently treated with ablation, 12% underwent liver transplantation, and 4%

• Median overall survival from initial diagnosis among patients with at least one round of TACE or TARE was 42 months (95% CI: 36 – NE) for those with a CR or PR in the first round, and 25 months (95% CI: 19 – 44) for those with SD or PD. • Median overall survival from initial diagnosis among patients with at least two rounds of therapy was 38 months (95% CI: 32 – NE) for those with a response pattern of CR/PR – CR/PR across the first two rounds and 24 months (95% CI: 18 – NE) for those with a pattern of CR/PR – SD/PD.

• The rate of TACE or TARE unsuitability was 66% after the first round of TACE or

• Only 20% of patients received systemic therapy after the first round of TACE or TARE, and only 24% of patients received systemic therapy after the second

• The assessment of TACE/TARE unsuitability is difficult in the retrospective

• Patterns of follow-up treatment patterns and outcomes were variable among patients with intermediate or advanced HCC receiving TACE or TARE as their first

• Approximately two thirds of evaluated patients may be considered unsuitable for TACE or TARE after a first or second round of treatment, but less than a quarter

• Educational efforts and multidisciplinary care can help increase guidelineconcordant care aiming to improve outcomes for patients with unresectable HCC.