Effects of molecular target agent therapy in advanced hepatocellular carcinoma: A multicenter, retrospective study

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INTRODUCTION

Recent years have witnessed a remarkable development in systemic chemotherapy for hepatocellular carcinoma (HCC) [1].

Currently, four molecular target agents (MTA) are available for the treatment of HCC in Japan [2].

Sequential therapy using multiple MTAs is gaining popularity as the gold standard of treatment [3,4].

However, the effect of the treatment strategy transition for HCC remains unclear.

AIM

The present study aimed to clarify the current practical use of systemic chemotherapy and its effect on HCC.

METHOD

- Multicenter, retrospective study.
- 877 patients who underwent MTA therapy for HCC.
- From June 2009 to March 2019.
- Patients were classified into three groups according to the period of initial MTA treatment.

  Period 1: 2009 to 2012
  Period 2: 2013 to 2016
  Period 3: 2017 to 2019

- Patient characteristics, patterns of MTA use, and prognosis were analyzed among the three groups.

RESULTS

Table 1. Patients' characteristics

Number of patients	877
Age (years) *	70.4 (9.0)
Sex (male)	698 (79.6%)
etiology	
HBV	169 (19.3%)
HCV	399 (45.5%)
Alcohol	178 (20.3%)
others	213 (24.3%)

* Mean (standard deviation)

Figure 1. Proportion of essential parameters

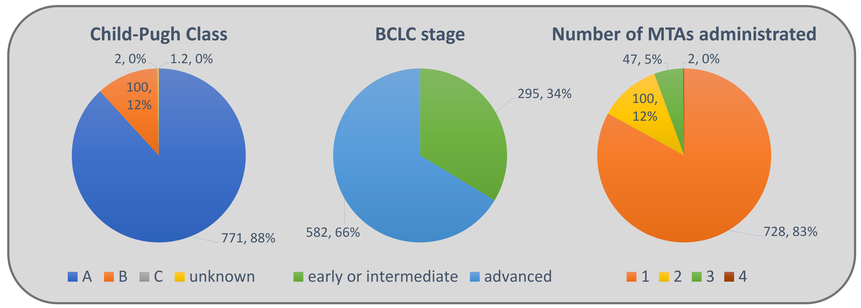
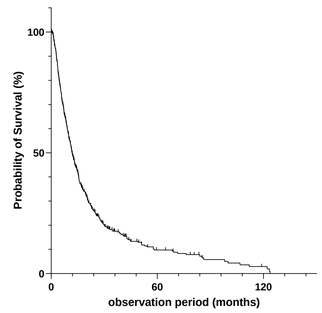


Figure 2. Overall survival of whole patients



Median overall survivals was 11.8 months.

Table 2. Patients' characteristics according to three periods

	Phase 1	Phase 2	Phase 3
Number of patients	267	352	258
Age (years) *	68.9 (9.7)	70.2 (8.1)	72.4 (9.3)
Child-Pugh Class			
A	239 (89.5)	306 (86.9)	226 (87.6)
others	28 (10.5)	46 (13.1)	32 (12.4)
2nd line treatment	3/267 (1.1)	36/347 (10.4)	110/244 (45.1)
Discontinuation due to AE**, All 1st line treatment	85/267 (31.8)	114/346 (32.9)	85/242 (35.1)
Discontinuation due to AE**, Sorafenib for 1st line			46/146 (31.5)
Discontinuation due to AE**, Lenvatinib for 1st line			39/96 (40.6)

* Mean (standard deviation) ** Adverse event

Figure 3. Transitions of BCLC stage and number of MTAs administrated to the patients

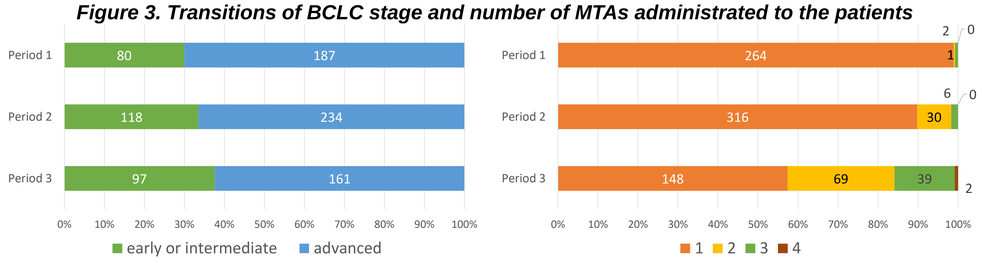
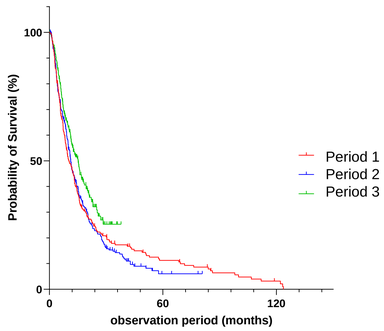
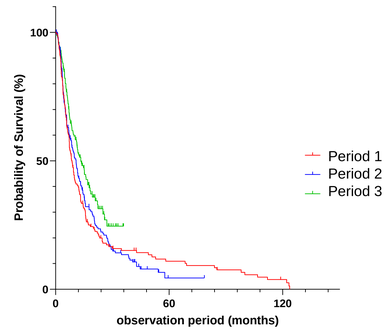


Figure 4. Transition of overall survival



Median overall survivals were as follows.
Period 1: 10.4months
Period 2: 11.3months
Period 3: 15.2months
Log rank test showed a significant difference between three phases ($p = 0.016$).

Figure 5. Transition of overall survival in advanced HCC patients



Median overall survivals were as follows.
Period 1: 8.7months
Period 2: 10.8months
Period 3: 13.3months
Log rank test showed a significant difference between three phases ($p = 0.021$).

CONCLUSIONS

- Sequential therapy with multiple MTAs has gained popularity with the passage of time, and has been noted to improve the prognosis.
- In the future, the development of MTA therapy for HCC is expected to continue.
- Therefore, further studies are warranted that can help determine the appropriate drugs, the sequence of MTA use, and the precise transition time.

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