P-108: Impact of dose adjustment on clinical outcome of lenvatinib-treated patients with advanced hepatocellular carcinoma (HCC)

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INTRODUCTION

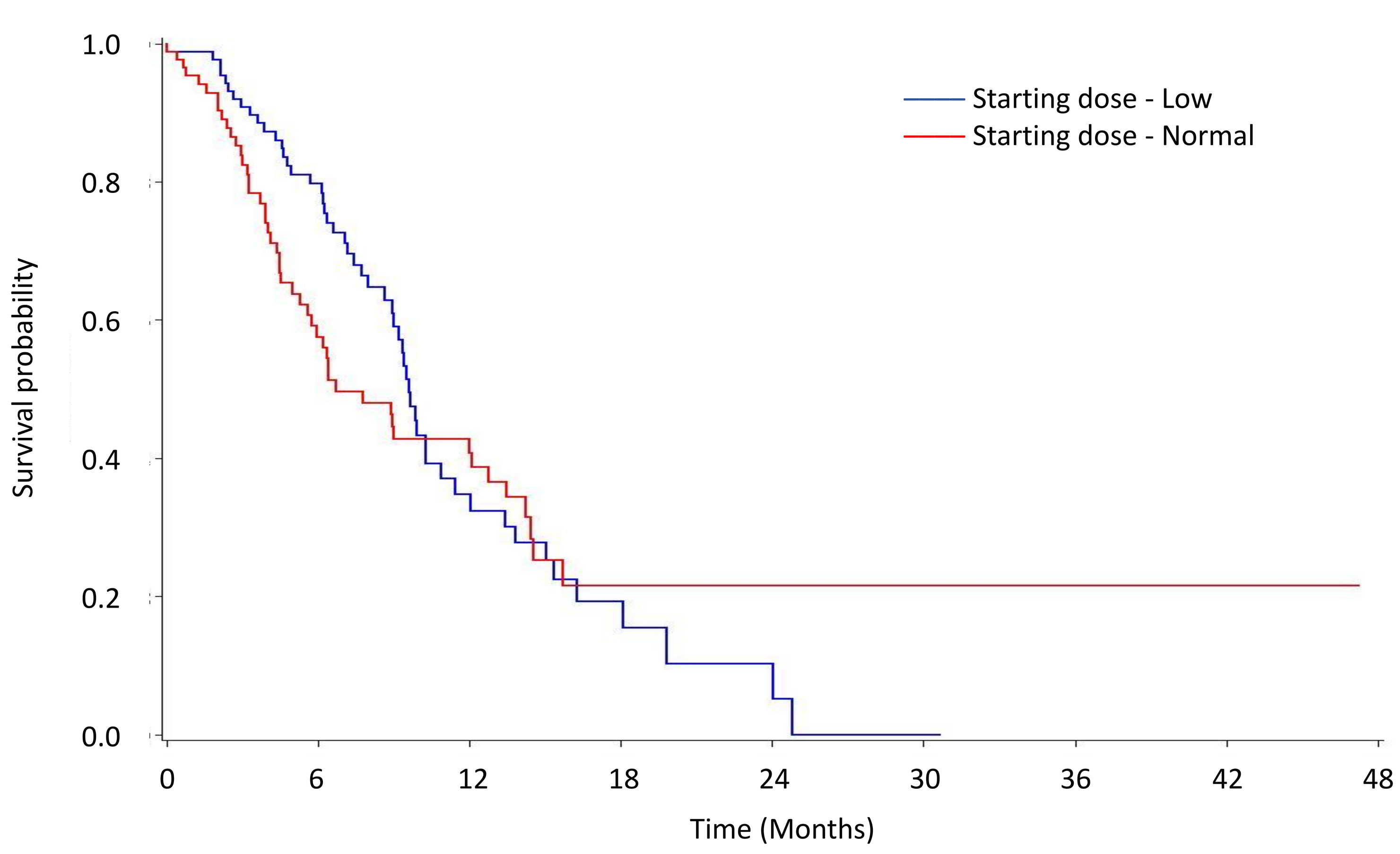
- For hepatocellular carcinoma (HCC), the recommended starting dose of lenvatinib is based on body weight (i.e. 12mg once daily for patients ≥60kg or 8mg once daily for patients <60kg) [1].
- In real-world practice, it is evident that clinicians may start lower doses of lenvatinib for selected patients and/or adjust the dose during treatment according to patients' conditions and adverse events.
- Currently, there are no data on the clinical impact of dose adjustment during treatment course.
- Since dose-intensity influences the survivals of patients treated with tyrosine kinase inhibitors (TKIs) [2], we aim to study the prognostic impact of dose adjustment of lenvatinib during the treatment course.

METHODS

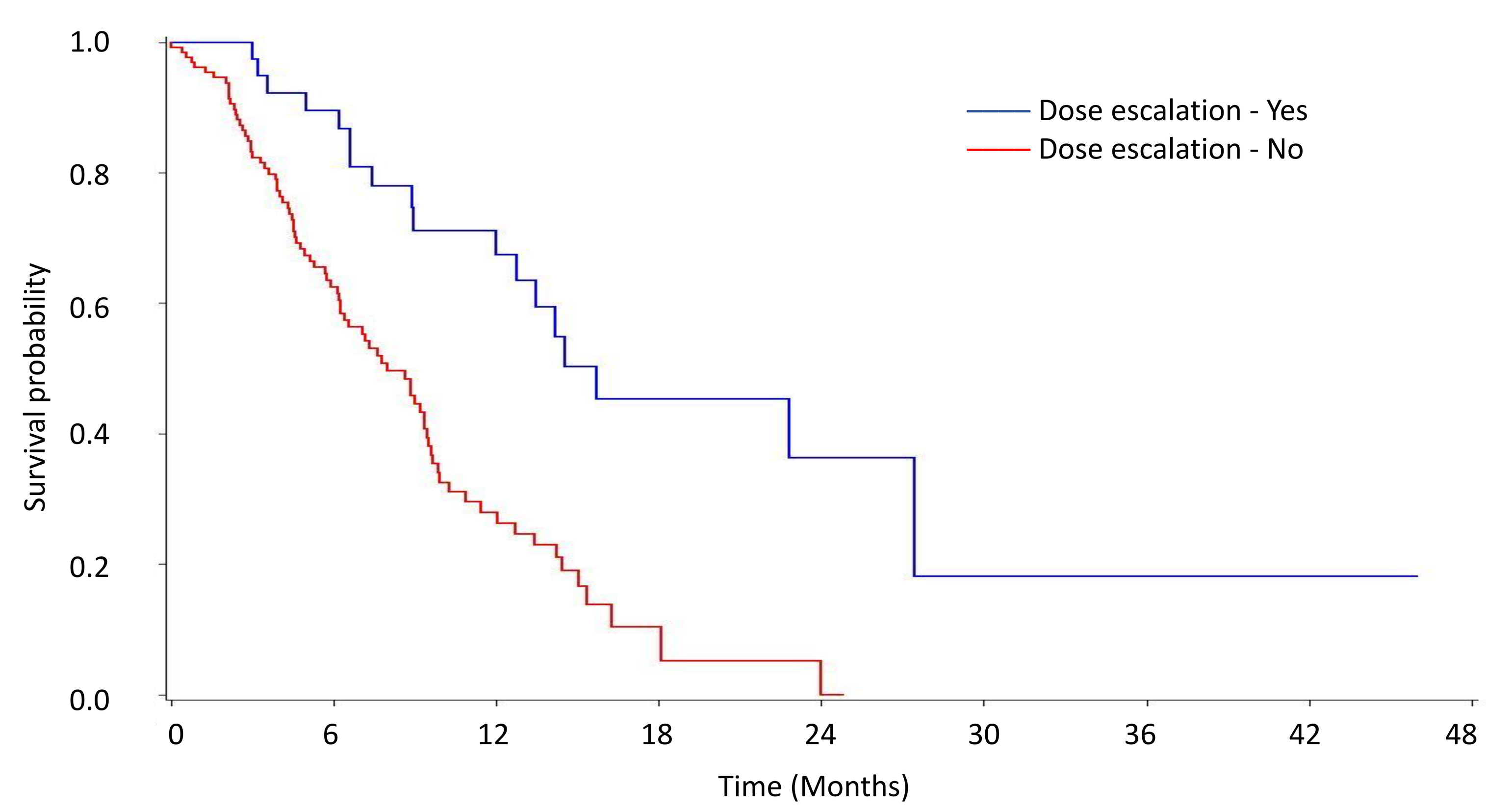
- This is a territory-wide study in Hong Kong with six participating oncology centers.
- Patients who received single-agent lenvatinib for HCC between Jan 2019 to June 2021 were recruited to the study. The study was approved by respective ethics committee in each institution.
- Data related to patients' characteristics, organ function, tumor-related parameters were collected. The starting dose at baseline and the occurrence/nature of dose adjustment along disease course of each patient in the first eight months of treatment were also recorded.
- Overall survival (OS) is the primary endpoint.
- Prognostic factors for OS were investigated using Kaplan-Meier survival analysis and Cox proportional hazards model.

RESULTS

- A total of 177 patients were recruited. There were 150 male patients (84.7%) and 27 female patients (15.3%). Median age was 66 years. 126 (71.2%) patients were HBsAg positive. Most patients had Child-Pugh score A (n=134; 75.7%), Albumin-Bilirubin (ALBI) grade 2 (n=127, 71.8%) and BCLC stage C (n=147; 83.0%). Over one-third of patients had advanced disease: >=50% of intrahepatic disease burden (N=67; 37.9%) and presence of portal vein disease (PVT) (n=60; 33.9%).
- Information regarding starting dose was missing in 3 patients. In the remaining 174 patients, 88 (50.5%) patients started lenvatinib at a lower dose and the other 86 (49.5%) patients started lenvatinib at the recommended dose. The median OS was not significantly different between the two different starting doses (low dose: 9.7 months vs. normal dose: 7.6 months, *p*=0.51; HR and 95% CI: 0.882 [0.60-1.30]; *p*=0.53) (Figure 1).
- Regarding dose adjustment, there were two patterns observed: Group A (n=45; 25.4%) who had dose escalation during treatment (either following lower starting dose or previous dose reduction during the treatment course); Group B (n=132; 74.6%) who had never experienced dose escalation during treatment. The median OS was significantly better for patients who had dose escalation during treatment (Group A: 15.8 months vs. Group B: 8.0 months, *p*<0.001; HR and 95% CI: 0.31 [0.18-0.53]; *p*<0.0001). In the multivariate analysis, patients with dose escalation during treatment remains an independent prognostic factor for OS after adjustment with other known significant prognosticators such as performance status, ALBI grading, portal vein thrombosis and alpha-fetoprotein.



Starting dose	n	Deaths	Median OS (95% CI), months	*p*-value
Low	88	52 (59.0%)	9.7 (9.0-10.9)	0.52
Normal	86	48 (55.8%)	7.6 (5.6-13.5)	-



Group	n	Deaths	Median OS (95% CI), months	*p*-value
A	45	19 (42.2%)	15.8 (12.1-30.6)	p<0.001
B	132	83 (62.9%)	8.0 (6.4-9.5)	-

CONCLUSION

- The current real-world data provide additional value of dose adjustment not covered in registration clinical trials. Starting lenvatinib at a lower dose is not associated with poorer outcome. Experiences of dose escalation during the treatment is associated with favorable outcomes with lenvatinib. In each clinical visit, clinicians should assess patients' condition and consider dose escalation of lenvatinib if feasible, amongst population who had lower starting dose than the recommended dose at baseline or prior dose reduction during the treatment course.

REFERENCES

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