Comparison of efficacy and safety of atezolizumab plus bevacizumab and lenvatinib as first-line therapy for unresectable hepatocellular carcinoma:

A propensity score matching analysis

Takashi Niizeki¹, Takayuki Tokunaga², Yuko Takami³, Yoshiyuki Wada³, Masaru Harada⁴, Michihiko Shibata⁴, Kazuhiko Nakao⁵, Ryu Sasaki⁵, Fumihito Hirai⁶, Satoshi Shakado⁶, Tomoharu Yoshizumi⁷, Shinji Itoh⁷, Hiroshi Yatsuhashi⁸, Shigemune Bekki⁸, Akio Ido⁹, Seiichi Mawatari⁹, Koichi Honda¹⁰, Rie Sugimoto¹¹, Takeshi Senju¹¹, Hirokazu Takahashi¹², Takuya Kuwashiro¹³, Tatsuji Maeshiro¹⁴, Makoto Nakamuta¹⁵, Yoshifusa Aratake¹⁵, Tsutomu Yamashita¹⁶, Yuichiro Otsuka¹⁶, Shuichi Matsumoto¹⁷, Tetsuro Sohda¹⁸, Shigeo Shimose^{1*}, Kenta Murotani¹⁹, Yasuhito Tanaka²: Kyushu Liver Cancer Study Group of Japan

- 1. Division of Gastroenterology, Department of Medicine, Kurume University School of Medicine, Kurume, Fukuoka 830-0011, Japan
- Department of Gastroenterology and Hepatology, Faculty of Life Sciences,
 Kumamoto University, Kumamoto, Japan
- Department of Hepato-Biliary-Pancreatic Surgery, National Hospital
 Organization Kyushu Medical Center, Fukuoka, Japan
- 4. Third Department of Internal Medicine, School of Medicine, University of Occupational and Environmental Health, Kitakyushu, Japan.
- 5. Department of Gastroenterology and Hepatology, Nagasaki University Hospital, Nagasaki, Japan.

- 6. Department of Gastroenterology and Medicine, Faculty of Medicine, Fukuoka University, Fukuoka, Japan
- 7. Department of Surgery and Science, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan.
- 8. Clinical Research Center, National Hospital Organization Nagasaki Medical Center, Department of Hepatology, Nagasaki University Graduate School of Biomedical Sciences, 2-1001-1 Kubara, Omura, Nagasaki, 856-8562, Japan.
- Department of Human and Environmental Sciences, Digestive and Lifestyle Diseases, Kagoshima University Graduate School of Medical and Dental Sciences, Kagoshima, Japan.
- Department of Gastroenterology, Faculty of Medicine, Oita University, Yufu,
 Japan
- 11. Department of Hepato-Biliary-Pancreatology, National Hospital Organization

 Kyushu Cancer Center, Fukuoka, Japan
- Division of Metabolism and Endocrinology, Faculty of Medicine, Saga
 University
- 13. Liver Center, Saga University Hospital, Faculty of Medicine, Saga University
- First Department of Internal Medicine, University of the Ryukyus Hospital,
 Okinawa, Japan
- 15. Department of Gastroenterology and Hepatology, National Hospital Organization Kyushu Medical Center, Fukuoka, Japan
- 16. Department of Gastroenterology, National Hospital Organization Oita Medical Center
- 17. Department of Gastroenterology, Fukuoka Tokushukai Hospital, Kasuga,

Japan.

- 18. Department of Hepatology, Japanese Red Cross Fukuoka Hospital, Fukuoka, Japan.
- 19. Biostatistics Center, Graduate School of Medicine, Kurume University

Supplementary Table 1. Response rate according to modified-RECIST before PSM

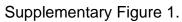
Response category	Atezo/Beva (n=161)	LEN (n=568)	р
CR	17 (10.6%)	40 (7.0%)	
PR	54 (33.6%)	230 (40.5%)	
SD	72 (44.7%)	189 (33.2%)	
PD	18 (11.1%)	109 (19.3%)	
ORR	67 (44.2%)	270 (47.5%)	0.440
DCR	143 (88.9%)	459 (80.7%)	0.013

Abbreviations: Atezo/beva; atezolizumab plus Bevacizumab, LEN; Lenvatinib, CR, complete response; PR, partial response; SD, stable disease; PD, progressive disease; ORR, objective response rate; DCR, disease control rate

Supplementary Table 2. Response rate according to modified-RECIST after PSM

Response category	Atezo/Beva (n=152)	LEN (n=152)	р
CR	17 (11.2%)	13 (8.5%)	
PR	50 (32.9%)	58 (38.2%)	
SD	70 (46.1%)	49 (32.2%)	
PD	15 (9.8%)	32 (21.1%)	
ORR	67 (44.8%)	71 (46.7%)	0.644
DCR	137 (90.2%)	120 (78.9%)	0.006

Abbreviations: Atezo/beva; atezolizumab plus Bevacizumab, LEN; Lenvatinib, CR, complete response; PR, partial response; SD, stable disease; PD, progressive disease; ORR, objective response rate; DCR, disease control rate



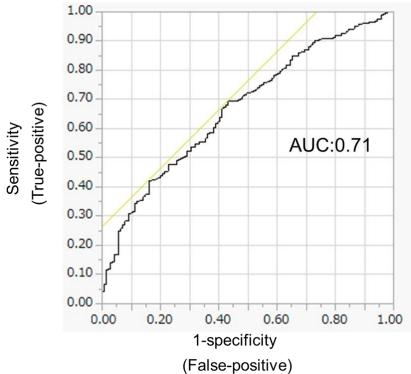


Figure legends

Supplementary Figure 1. C-statics by using ROC analysis.