# Differences in Presentation and Management Patterns in Patients with Hepatocellular Carcinoma (HCC): Data from HCC Registry in Asia

# Pierce K. H. Chow<sup>1</sup>\*, Lequn Li<sup>2</sup>, Jiangtao Li<sup>3</sup>, Fan Jia<sup>4</sup>, Hee-Jee Wang<sup>5</sup>, Kiyoshi Hasegawa<sup>6</sup>, Jin-Mo Yang<sup>7</sup>, Poh-Seng Tan<sup>8</sup>, Shukui Qin<sup>9</sup>, Kwang-Hyub Han<sup>10</sup>, Brian K. P. Goh<sup>11</sup>, Ho Seong Han<sup>12</sup>,

<sup>6</sup>Hepato-Biliary-Pancreatic Surgery Division, Department of Surgery, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan; <sup>7</sup>St Vincents Hospital, Singapore; <sup>9</sup>Nanjing Bayi Hospital, Nanjing, Jiangsu, China; <sup>10</sup>Severance Hospital, Seoul, Korea, Republic of (South); <sup>11</sup>Singapore General Hospital, Singapore, Singapore; <sup>12</sup>Department of Surgery, Seoul National University College of Medicine, Tokyo, Japan; <sup>14</sup>Beijing Cancer Hospital, Beijing, China; <sup>15</sup>Singapore Clinical Research Institute, Singapore, S

# BACKGROUND

- HCC is the 6th most common cancer worldwide and 2nd most common cause of cancer related deaths, with > 70% of cases in Asia<sup>1,2</sup>.
- Less than 20% of HCC are amendable to surgery at time of diagnosis<sup>3</sup> – and important differences exists in the reported outcomes for Asia-Pacific and Western populations in recent studies for sorafenib<sup>4</sup>, cabozantinib<sup>5</sup>, regorafenib<sup>6</sup>, and lenvatinib<sup>7</sup>.
- The current limited real-world data on the diagnosis, presentation, and management of HCC in different countries hampers the development of sound policies.

# METHODS

The HCC Registry in Asia (AHCC08) is a multi-country (9 countries: Singapore, China, Japan, South Korea, Taiwan, Hong Kong, Thailand, Australia and New Zealand) longitudinal cohort study of HCC patients diagnosed 2013 2019 (ClinicalTrials.gov: between and NCT03233360). Eligible patients attending routine visits are approached by their treating physician and invited to participate in the registry, and informed consent (IC) obtained as per local legislation. Treatment decisions and clinical management of patients are in accordance with local clinical practices and at the discretion of the treating physician. Retrospectively identified eligible patients who have died prior to the start of the registry are included by their treating physician if eligible. We present early data on diagnosis, etiology, stage at presentation, and treatment modalities of HCC from China [CN] (5 centers), Singapore [SG] (3 centers), South Korea [SK] (4 centers), and Japan [JP] (2 centers).

#### Table 1 | Demographic and Baseline characteristics.

#### Variables

#### Gender, n(%)

• Female

#### Male

#### Drinking Status, n(%)

- Never
- 1-14 units/week\*
- 15+ units/week\*
- Unknown

#### Initial confirmatory diagno

- AASLD imaging criteria
- APASL imaging criteria
- Radiology Space occupying lesion in liver and AFP > 400 in patient with chronic viral hepatitis or cirrhosis from any cause
- Pending

one mode of confirmatory diagnosis

#### Table 2 | First line and second line therapies for management of HCC (all stages at presentation).

Surgical Procedure39.9%Surgical ProcedureSurgical Procedure	/0
Surgical ProcedureSurgical Procedure2.3%Surgical ProcedureLoco-regional Therapy2.6%Surgical ProcedureSystemic Therapy3.4%Surgical ProcedureSystemic Therapy3.4%Loco-regional TherapySystemic Therapy3.4%Loco-regional TherapySurgical ProcedureSystemic Therapy3.4%Loco-regional TherapyLoco-regional Therapy0.2%Loco-regional TherapySurgical Procedure2Loco-regional TherapyLoco-regional Therapy0.2%Surgical ProcedureSurgical Procedure2Loco-regional TherapySurgical Procedure2.1%Surgical ProcedureSurgical Procedure2Loco-regional TherapySystemic Therapy0.5%Surgical ProcedureSurgical ProcedureSurgical Procedure2Systemic TherapySystemic Therapy0.5%Surgical ProcedureSurgical ProcedureSurgical Procedure12Systemic TherapySystemic Therapy0.5%Systemic TherapySystemic Therapy12Systemic TherapySystemic Therapy0.5%Systemic TherapySystemic Therapy12Surgical ProcedureLoco-regional Therapy0.5%Systemic TherapySystemic Therapy2Surgical ProcedureLoco-regional Therapy0.5%Systemic TherapySystemic Therapy2Surgical ProcedureLoco-regional Therapy0.5%Systemic TherapySystemic Therapy2Surgical ProcedureLoco-regional Therapy2.4%Systemic TherapySystemic Therapy	5.9%
Surgical ProcedureLoco-regional Therapy22.5%JapanSurgical ProcedureSystemic Therapy8Surgical ProcedureSystemic Therapy3.4%Loco-regional TherapyLoco-regional TherapySurgical Procedure2Loco-regional TherapyLoco-regional TherapyLoco-regional Therapy0.2%Loco-regional TherapySurgical Procedure2Loco-regional TherapyLoco-regional TherapySurgical Procedure2.1%Surgical ProcedureSurgical Procedure2Loco-regional TherapySystemic Therapy0.5%Surgical ProcedureSurgical Procedure22Systemic TherapySystemic Therapy0.5%Surgical ProcedureSurgical Procedure22Systemic TherapySystemic Therapy0.5%Systemic TherapySystemic Therapy2Systemic TherapyLoco-regional Therapy0.5%Systemic TherapySystemic Therapy2Systemic TherapyLoco-regional Therapy0.5%Systemic TherapySystemic Therapy2Systemic TherapyLoco-regional Therapy0.5%Systemic TherapySystemic Therapy2Systemic TherapyLoco-regional Therapy0.5%Systemic TherapySystemic Therapy2Surgical ProcedureLoco-regional Therapy0.5%Systemic TherapySystemic Therapy2Surgical ProcedureLoco-regional Therapy2.4%Systemic TherapySystemic Therapy2Surgical ProcedureSystemic Therapy1.2%Loco-regional TherapyL	0.6%
Surgical ProcedureSystemic Therapy3.4%Loco-regional TherapyLoco-regional TherapySurgical ProcedureSurgical Proced	8.8%
ChinaLoco-regional TherapyLoco-regional TherapySurgical Procedure23.9%Loco-regional TherapyLoco-regional TherapyLoco-regional Therapy0.2%Surgical Procedure12Loco-regional TherapySurgical Procedure2.1%Surgical ProcedureSurgical Procedure2Loco-regional TherapySystemic Therapy0.5%Surgical ProcedureLoco-regional TherapySurgical ProcedureSurgical Procedure2Systemic TherapySystemic Therapy0.5%Systemic TherapySystemic Therapy1.1%Surgical ProcedureSystemic Therapy4Systemic TherapySystemic Therapy0.7%Systemic TherapySystemic Therapy0.5%Systemic TherapySystemic Therapy12Systemic TherapyLoco-regional Therapy0.5%Systemic TherapySystemic Therapy12Surgical ProcedureSystemic Therapy0.5%Systemic TherapySystemic Therapy12Surgical ProcedureLoco-regional Therapy0.5%Systemic TherapySystemic Therapy12Surgical ProcedureLoco-regional Therapy2.4%Systemic TherapySystemic Therapy12SouthLoco-regional Therapy1.2%Loco-regional TherapyLoco-regional Therapy13Loco-regional TherapyLoco-regional Therapy1.2%Loco-regional TherapyLoco-regional Therapy13SouthLoco-regional Therapy1.2%Loco-regional TherapyLoco-regional TherapyLoco-regional Therapy13Loco-regiona	2.9%
ChinaLoco-regional TherapyLoco-regional Therapy0.2%Surgical Procedure2.1%Loco-regional TherapySurgical Procedure2.1%Surgical ProcedureSurgical Procedure2Surgical Procedure <td>2.9%</td>	2.9%
Loco-regional TherapySurgical Procedure2.1%Surgical ProcedureSurgical Procedu	2.7%
Loco-regional TherapySystemic Therapy0.5%Surgical ProcedureLoco-regional Therapy6Systemic TherapySystemic Therapy1.1%Surgical ProcedureSystemic Therapy1.2%Systemic TherapyLoco-regional Therapy0.5%Systemic TherapySystemic Therapy1.2%Surgical ProcedureLoco-regional Therapy0.5%Systemic TherapySystemic Therapy1.2%Surgical ProcedureLoco-regional Therapy2.4%Systemic TherapySurgical ProcedureSurgical ProcedureSystemic Therapy2.4%Surgical ProcedureSystemic Therapy1.2%1.2%Loco-regional TherapyLoco-regional Therapy1.2%SouthLoco-regional Therapy1.2%1.2%1.2%1.2%1.2%	2.9%
Systemic TherapySystemic Therapy1.1%Surgical ProcedureSystemic Therapy1.1%Systemic TherapySystemic Therapy0.7%Systemic TherapySystemic Therapy12Systemic TherapyLoco-regional Therapy0.5%Systemic TherapySystemic Therapy12Surgical ProcedureLoco-regional Therapy2.4%Systemic TherapyLoco-regional Therapy2.4%SouthLoco-regional Therapy1.2%Loco-regional TherapyLoco-regional Therapy1.2%	6.9%
Systemic TherapySystemic Therapy0.7%Systemic TherapySystemic Therapy12Systemic TherapyLoco-regional Therapy0.5%Systemic TherapySystemic TherapySyst	4.9%
Systemic TherapyLoco-regional Therapy0.5%SingaporeSystemic TherapySystemic Therapy4Surgical ProcedureLoco-regional Therapy2.4%Systemic TherapyLoco-regional Therapy2.4%Surgical ProcedureLoco-regional Therapy2.4%Systemic TherapySurgical ProcedureSurgical Procedure1.2%SouthLoco-regional Therapy1.2%Loco-regional TherapyLoco-regional Therapy1.2%	2.7%
Surgical Procedure 12.9% Systemic Therapy Loco-regional Therapy 2   Surgical Procedure Loco-regional Therapy 2.4% Systemic Therapy Surgical Procedure Surgical Procedure 12   Surgical Procedure Systemic Therapy 1.2% Loco-regional Therapy 13   South Loco-regional Therapy 1.2% Loco-regional Therapy Loco-regional Therapy 4	4.9%
Surgical Procedure Loco-regional Therapy 2.4% Systemic Therapy Surgical Procedure 1   Surgical Procedure Systemic Therapy 1.2% Loco-regional Therapy 13   South Loco-regional Therapy 1.2% Loco-regional Therapy Loco-regional Therapy 13	2.0%
Surgical Procedure   Systemic Therapy   1.2%   Loco-regional Therapy   13     South   Loco-regional Therapy   1.2%   Loco-regional Therapy   13	1.0%
South Loco-regional Therapy 1.2% Loco-regional Therapy Loco-regional Therapy 4	3.7%
	4.9%
Korea Loco-regional Therapy Surgical Procedure 2.4% Loco-regional Therapy Systemic Therapy 8	8.8%
Loco-regional Therapy Systemic Therapy 1.2% Loco-regional Therapy Surgical Procedure 7	7.8%
Systemic Therapy 1.2%	
Systemic Therapy Systemic Therapy 1.2%	

Sorafenib and other chemotherapy agents

#### Abstract Number: 229

Poster presented at the American Society of Clinical Oncology – Gastrointestinal Cancers Symposium, January 17-19, 2019, San Francisco, CA. DISCLAIMER: Copies of this poster obtained through Quick Response (QR) Code are for personal use only and may not be reproduced without permission from ASCO® and the author of this poster.

Junji Furuse<sup>13</sup>, Xu Zhu<sup>14</sup>, Joanna Zhi Jie Ling<sup>15</sup>, Mihir Gandhi<sup>15</sup>

# RESULTS

	China	Japan	Singapore	South Korea	-	
	(N = 436)	(N = 34)	(N = 102)	(N = 85)	-	
	49 (11.2)	10 (29.4)	19 (18.6)	20 (23.5)		
	387 (88.8)	24 (70.6)	83 (81.4)	65 (76.5)		
	277 (63.5)	10 (29.4)	56 (54.9)	29 (34.1)		
	82 (18.8)	13 (38.2)	20 (19.6)	23 (27)		
	71 (16.3)	9 (26.5)	18 (17.7)	7 (8.2)		
	6 (1.4)	2 (5.9)	8 (7.8)	26 (30.6)		
S	sis, n(%)					
	55 (12.6)	NA	67 (65.7)	54 (63.5)		
	2 (0.5)	NA	82 (80.4)	17 (20)		
	275 (63.1)	6 (17.6)	15 (14.7)	23 (27.1)		
	141 (32.3)	31 (91.2)	33 (32.4)	14 (16.5)		
	1 (0.2)	3 (8.8)	NA	14 (16.5)		

\*1 unit means 1 beer, or 1 glass of wine or 1 shot of liquor; \*\*Percentage may add up to more than 100% if subjects have more than

Surgical Procedure includes liver resection, RFA, transplantation and TAE; Loco-regional Therapy includes TACE and TAI; Systemic Therapy includes



#### Figure 3 | BCLC stage at presentation.

Figure 1 | Age distribution at



#### Figure 4 | Etiology of liver disease at presentation.



# CONCLUSION

#### Figure 2 | Drinking Status at

1-14 units/week 15+ units/week



South Korea

- Patients from China were diagnosed at a younger age, while patients from Japan were diagnosed at an older age.
- 16% consumes 15+ units/week of alcohol and are considered heavy drinkers, and another 21% consumes 1-14 units/week across the 4 geographies
- 77% had Hepatitis B across the 5 geographies, with the highest incidence in China, followed by South Korea. 27% were diagnosed using AASLD/APASL imaging criteria, with the highest utilization in Singapore and South Korea. Later-stage patients (BCLC) were more predominant in Japan.
- In China, liver resection was preferred in first-line HCC treatment in spite of more advanced stage of disease, followed by loco-regional and systemic therapy.

### REFERENCES

- <sup>1</sup> Bray F, Ferlay J, Soerjomataram I, et al. CA Cancer J Clin. 2018; 1-31
- <sup>2</sup> Omata M, Cheng AL, Kokudo N, et al. Hepatol Int. 2017; 11(4): 317-370
- <sup>3</sup> Dimitroulis D, Damaskos C, Valsami S, et al. World J Gastroenterol. 2017; 23(29): 5282-5294
- <sup>4</sup> Lee SH, Song IH, Noh R, et al. BMC Cancer. 2015; 15:236
- <sup>5</sup> Abou-Alfa GK, Meyer T, Cheng AL, et al. N Engl J Med. 2018; 379(1): 54-63
- <sup>6</sup> Bruix J, Qin S, Merle P, et al. Lancet. 2017; 389(10064): 56-66
- <sup>7</sup> Kudo M, Finn RS, Qin S, et al. Lancet. 2018; 391(10126): 1163-1173

\*Correspondence: pierce.chow.k.h@singhealth.com.sg

