

厚生労働行政推進調査事業費補助金（肝炎等克服政策研究事業）
分担研究報告書

肝がん・重度肝硬変の治療に係るガイドラインの作成等に資する研究

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研究要旨

データ収集プラットフォーム整備

A. 研究目的

肝癌重度肝硬変のうち特に肝癌の治療に係る各国の研究状況と診療の実態調査。

B. 研究方法

肝癌に関する各種国際学会に出席し、各国における各ステージにおける治療成績、治療の適応などにおいて我が国と比較を行った。

C. 研究結果

日本の肝癌のサーベイランス、診断、治療は他国と比べて優れているということ、および治療方針なども他国と大きく異なっていることが明らかとなった。

D. 考察

今後日本において肝癌や重度肝硬変において効率的に進めるためには、患者の経済的サポートも重要と考えられた。

E. 結論

日本の肝癌の診療レベルは世界的に優れているが、更に患者の経済的援助が必要と考えられた。

F. 健康危険情報

なし

G. 研究発表

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 13. Yau T, Hsu C, Kang YK, Kim TY, Hou MM, Lim HY, Chao Y, Kim YH, Ikeda M, Choo SP, Neely J, Shen Y, Tschaike M, Kudo M: Efficacy and safety of Nivolumab + Ipilimumab in Asian patients with advanced hepatocellular carcinoma: Subanalysis of the CheckMate 040 study. ESMO World Congress on Gastrointestinal Cancer 2020 (ESMO-GI 2020), Barcelona, Spain, July 1-4, 2020.
 14. Llovet JM, El-Khoueiry AB, Vogel A, Madoff DC, Finn RS, Ogasawara S, Ren Z, Mody K, Li JJ, Siegel AB, Dubrovsky L, Kudo M:

- LEAP-012 trial in progress: pembrolizumab plus Lenvatinib and transarterial chemoembolization (TACE) in patients with intermediate-stage hepatocellular carcinoma (HCC) not amenable to curative treatment. ESMO World Congress on Gastrointestinal Cancer 2020 (ESMO-GI 2020), Barcelona, Spain, July 1-4, 2020.
15. Ducreux M, Zhu AX, Qin S, Ikeda M, Kim TY, Lim HY, Kudo M, Breder V, Merle P, Kaseb A, Li D, Verret W, Xu D, Hernandez S, Liu J, Shao H, Huang C, Cheng AL, Finn RS, Galle PR: Atezolizumab + bevacizumab versus sorafenib in patients with unresectable hepatocellular carcinoma: safety results from the Phase III IMbrave150 study. EASL Digital International Liver Congress (EASL-ILC 2020), August 27-29, 2020.
 16. Merle P, Chan SL, Zhu AX, Finn RS, Edeline J, Ogasawara S, Knox JJ, Daniele B, Ryoo BY, Merle P, Bouattour M, Lim HY, Chao Y, Yau T, Haber BA, Malhotra U, Liu CC, Kudo M, Cheng AL: Effect of pembrolizumab (pembro) on hepatitis B viral (Hbv) load and aminotransferase (Alt) levels in patients (Pts) with advanced hepatocellular carcinoma (Ahcc) in Keynote-224 and Keynote-240. 14th Annual Conference International Liver Cancer Association (ILCA 2020), Madrid, Spain, September 11-13, 2020.
 17. Vogel A, Zhu A, Kudo M, Yau T, Zhou J, Kim E, Malhotra U, Siegel AB, Cheng AL: Phase 3 KEYNOTE-937: adjuvant pembrolizumab versus placebo in patients with hepatocellular carcinoma and complete radiologic response after surgical resection or local ablation. 14th Annual Conference International Liver Cancer Association (ILCA 2020), Madrid, Spain, September 11-13, 2020.
 18. Finn RS, Ogasawara S, Llovet JM, El-Khoueiry AB, Vogel A, Madoff DC, Ren Z, Mody K, Li JJ, Siegel AB, Dubrovsky L, Kudo M: Leap-012: A randomized, double-blind, phase 3 study of pembrolizumab plus lenvatinib in combination with transarterial chemoembolization (TACE) in patients with Intermediate-stage hepatocellular carcinoma (HCC) not amenable to curative treatment. 14th Annual Conference International Liver Cancer Association (ILCA 2020), Madrid, Spain, September 11-13, 2020.
 19. Chan SL, Zhu AX, Finn RS, Edeline J, Ogasawara S, Knox JJ, Daniele B, Ryoo BY, Merle P, Bouattour M, Lim HY, Chao Y, Yau T, Haber BA, Malhotra U, Liu CC, Kudo M, Cheng AL: Effect of pembrolizumab (pembro) on hepatitis B viral (HBV) load and aminotransferase (ALT) levels in patients (pts) with advanced hepatocellular carcinoma (aHCC) in KEYNOTE-224 (KN224) and KEYNOTE-240 (KN240). 23rd Annual Meeting of Chinese Society of Clinical Oncology (CSCO 2020), Xiamen, China, September 16-20, 2020.
 20. Qin S, Kelley K, Kudo M, Harris W, Ikeda M, Okusaka T, Kang YK, Tai DWM, Lim HY, Yau T, Yong WP, Cheng AL, Gasbarrini A, Damian S, Bruix J, Borad M, He P, Negro A, Sangro B, Abou-Alfa G: The novel regimen of tremelimumab (T) plus durvalumab (D) in patients (Pts) with unresectable hepatocellular carcinoma (uHCC) by viral etiology. 23rd Annual Meeting of Chinese Society of Clinical Oncology (CSCO 2020), Xiamen, China, September 16-20, 2020.
 21. Vogel A, Merle P, Verslype C, Finn RS, Zhu AX, Cheng AL, Chan SL, Yau T, Ryoo BY, Wei Z, Holynskij A, Siegel AB, Kudo M: Baseline liver function and outcomes in patients with unresectable hepatocellular

- carcinoma (HCC) in KEYNOTE-240. European Society for Medical Oncology (ESMO) congress, Madrid, Spain, September 19-21, 2020.
22. Ikeda M, Zhu AX, Qin S, Kim TY, Lim HY, Kudo M, Breder V, Merle A, Kaseb A, Li D, Ma N, Villalobos M, Stanzel S, Gaillard VE, Xu DZ, Hernandez S, Cheng AL, Finn RS, Galle PR, Ducreux M: IMbrave150: management of adverse events of special interest (AESIs) for atezolizumab and bevacizumab in patients with unresectable hepatocellular carcinoma. European Society for Medical Oncology (ESMO) congress, Madrid, Spain, September 19-21, 2020.
 23. Yoo C, Oh DY, Choi HJ, Kudo M, Ueno M, Kondo S, Chen LT, Osada M, Helwig C, Dussault I, Ikeda M: Long-term follow-up of bintrafusp alfa, a bifunctional fusion protein targeting TGF- β and PD-L1, in patients with pretreated biliary tract cancer. European Society for Medical Oncology (ESMO) congress, Madrid, Spain, September 19-21, 2020.
 24. Vogel A, Zhu A, Cheng AL, Yau T, Zhou J, Kim E, Malhotra U, Siegel AB, Kudo M: KEYNOTE-937 trial in progress: adjuvant pembrolizumab for hepatocellular carcinoma and complete radiologic response after surgical resection or local ablation. European Society for Medical Oncology (ESMO) congress, Madrid, Spain, September 19-21, 2020.
 25. Llovet JM, El-Khoueiry AB, Vogel A, Madoff DC, Finn RS, Ogasawara S, Ren Z, Mody K, Li JJ, Siegel AB, Dubrovsky L, Kudo M: LEAP-012 trial in progress: pembrolizumab plus Lenvatinib and transarterial chemoembolization (TACE) in patients with intermediate-stage hepatocellular carcinoma (HCC) not amenable to curative treatment. European Society for Medical Oncology (ESMO) congress, Madrid, Spain, September 19-21, 2020.
 26. Vogel A, Zhu A, Cheng AL, Yau T, Zhou J, Kim E, Malhotra U, Siegel AB, Kudo M: KEYNOTE-937 trial in progress: adjuvant pembrolizumab for hepatocellular carcinoma and complete radiologic response after surgical resection or local ablation. American Association for the Study of Liver Diseases (AASLD 2020), Boston, USA, November 13-16, 2020
 27. Vogel A, Llovet JM, El-Khoueiry A, Madoff DC, Finn RS, Ogasawara S, Ren Z, Mody K, Li JJ, Siegel AB, Dubrovsky L, Kudo M: LEAP-012 trial in progress: pembrolizumab, lenvatinib, and transarterial chemoembolization combination therapy for intermediate-stage hepatocellular carcinoma not amenable to curative treatment. American Association for the Study of Liver Diseases (AASLD 2020), Boston, USA, November 13-16, 2020
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 29. Sangro B, Harding JJ, Johnson M, Palmer D, Edeline J, Abou-Alfa G, Cheng AL, Decaens T, El-Khoueiry AB, Finn R, Galle P, Park JW, Yau T, Begic D, Shen Y, Neely J, Sama A, Kudo M: A Phase 3, double-blind, randomized study of

- Nivolumab and Ipilimumab, nivolumab monotherapy, or placebo plus transarterial chemoembolization in patients with intermediate-stage hepatocellular carcinoma. Gastrointestinal Cancers Symposium (ASCO-GI 2021), Virtual, January 15-17, 2021.
30. El-Khoueiry A, Yau T, Kang YK, Kim TY, Santoro A, Sangro B, Melero I, Kudo M, Hou MM, Matilla A, Tovoli F, Knox TJ, He AR, El-Rayes BF, Acosta-Rivera M, Lim HY, Memaj A, Sama AR, Hsu C: Nivolumab (NIVO) plus ipilimumab (IPI) combination therapy in patients (pts) with advanced hepatocellular carcinoma (aHCC): Long-term results from CheckMate 040. Gastrointestinal Cancers Symposium (ASCO-GI 2021), Virtual, January 15-17, 2021.
 31. Uppot RN, Kudo M, Zhu AX, Cheng AL, Yau T, Zhou J, Kim E, Malhotra U, Siegel AB, Vogel A: KEYNOTE-937 trial in progress: adjuvant pembrolizumab for hepatocellular carcinoma and complete radiologic response after surgical resection or local ablation. SIO 2021 congress, February 3-6, 2021.
 32. Finn RS, Qin S, Ikeda M, Galle PR, Ducreux M, Kim TY, Lim HY, Kudo M, Breder VV, Merle P, Kaseb AO, Li D, Verret W, Shao H, Liu J, Li L, Zhu AX, Cheng AL: IMbrave150: Updated overall survival (OS) data from a global, randomized, open-label Phase 3 study of atezolizumab (atezo) + bevacizumab (bev) vs sorafenib (sor) in patients (pts) with unresectable hepatocellular carcinoma (HCC). European Association for the Study of the Liver (EASL) Digital Liver Cancer Summit 2021, February 5-6, 2021.
 33. Vogel A, Zhu A, Kudo M, Yau T, Zhou J, Kim E, Malhotra U, Siegel AB, Cheng AL: Phase 3 KEYNOTE-937 trial: adjuvant pembrolizumab for hepatocellular carcinoma and complete radiologic response after surgical resection or local ablation. European Association for the Study of the Liver (EASL) Digital Liver Cancer Summit 2021, February 5-6, 2021.
 34. Masi G, Ikeda M, Finn RS, Merle P, Lim HY, Kudo M, Klumpen HJ, Frenette C, Kim YJ, Gerolami R, Kurosaki M, Numata K, Zebger-Gong H, Fiala-Buskies S, Ozgurdal K, Qin S: Characteristics of patients who received regorafenib for unresectable hepatocellular carcinoma in routine clinical practice: interim analysis of the prospective, observational REFINE study. European Association for the Study of the Liver (EASL) Digital Liver Cancer Summit 2021, February 5-6, 2021.
 35. Ikeda M, Lim HY, Kim TY, Qin S, Finn RS, Galle PR, Ducreux M, Breder V, Merle P, Kaseb A, Li D, Zhu AX, Verret W, Shao H, Liu J, Li L, Cheng AL, Kudo M: IMbrave150: updated overall survival data from a global, randomized, open-label Phase III study of atezolizumab + bevacizumab vs sorafenib in unresectable hepatocellular carcinoma. 30th Annual Conference Asian Pacific Association for the Study of the Liver (APASL 2021), February 4-6, 2021 (Virtual).
 36. Izumi N, Motoyoshi K, Kudo M, Motomura K, Inaba Y, Katamura Y, Kondo Y, Yabushita K, Furuse J: A multicenter observational study of lenvatinib for unresectable hepatocellular carcinoma in Japan -Interim analysis. 30th Annual Conference Asian Pacific Association for the Study of the Liver (APASL 2021), February 4-6, 2021 (Virtual).
 37. Vogel A, Zhu AX, Cheng AL, Yau T, Zhou J, Kim E, Malhotra U, Siegel AB, Kudo M: KEYNOTE-937 trial in progress: adjuvant pembrolizumab for hepatocellular carcinoma and complete radiologic response after surgical

resection or local ablation. SIR 2021 congress,
March 20-25, 2021.

H. 知的財産権の出願・登録状況（予定を含む）

- 1) 特許取得：なし
- 2) 実用新案登録：なし
- 3) その他：なし