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Press Release

A New Prognostic Score System for Advanced Primary Liver Cancer To Enhance Clinical Trials on Novel Drug Therapies

The Department of Surgery, The University of Hong Kong Li Ka Shing Faculty of Medicine and Queen Mary Hospital, has recently established **a new prognostic score system, the Advanced Liver Cancer Prognostic System (ALCPS)** which is able to objectively predict the probability of 3-month survival of the advanced primary liver cancer patients who are not amenable to surgery or other local ablative therapies.

The academic paper regarding the ALCPS has been accepted for publication in an international medical journal *Cancer*, a journal published by the American Cancer Society.

High Prevalence of Primary Liver Cancer in Asia

Primary liver cancer is the fifth ranking cancer in the world, accounting for 5.4% of all human cancer cases. More than 80% of the world's primary liver cancer cases occur in Asia.

Primary liver cancer is the third leading cause of cancer death in Hong Kong, with more than 1,600 new cases per year. The commonest causes of primary liver cancer are hepatitis B and hepatitis C viral infections.

Treatments for Advanced Primary Liver Cancer Patients

Current effective treatments for primary liver cancer include liver resection, transplantation, various local ablative and trans-arterial therapies. Surgical resection and liver transplantation are the main curative therapies. Unfortunately, only around 20% patients, mostly diagnosed by regular screening, may benefit from these surgical therapies. About 30% of patients present with very advanced local or metastatic disease not amenable to surgical or locoregional therapies.

Primary liver cancer is a relatively chemotherapy-resistant disease, and conventional chemotherapy has not been shown to improve survival. Until recently, best supportive treatment alone used to be the standard of care. Recent advances in molecular targeting therapy have opened hope for some patients with advanced disease, and several molecular targeting drugs are undergoing clinical trial.

A New System as a Guide for Prognosis and Treatment

For patients to benefit from any novel drug treatment, a reasonable life expectancy is needed for the drug to work. Nowadays, most systemic drug trials in advanced primary liver cancer require a life expectancy of more than 3 months as a basic inclusion criterion in order to fairly

assess its activity. Unfortunately, in some patients with advanced primary liver cancer, the tumor may progress rapidly or liver function may deteriorate rapidly so that patient may not benefit from such drug trials.

The currently available staging or prognostic systems provide little information in assisting the clinicians to reliably predict the survival of advanced primary liver cancer patients and select appropriate candidates into systemic drug trials. With the rapid development of new agents for advanced primary liver cancer patients that will be evaluated in clinical trials, it is imperative to develop a prognostic score system that can more objectively predict the prognosis of patients with advance primary liver cancer so that appropriate patients can be recruited into such trials.

The **ALCPS**, developed by the Department of Surgery, The University of Hong Kong Li Ka Shing Faculty of Medicine and Queen Mary Hospital, was based on 11 prognostic factors with different weights, including **clinical parameters** (including ascites, abdominal pain, weight loss), **liver function parameters** (including Child-Pugh grade (a measure of cirrhosis), alkaline phosphatase, bilirubin level, alpha-fetal protein, urea) and **tumor parameters** (including portal vein thrombosis, tumor size, lung metastasis). This new prognostic system can objectively help the clinician to select appropriate candidates for evaluation of treatment efficacy in systemic therapy trials for advanced primary liver cancer.

Conclusion and Significance of the New Score System

The ALCPS can objectively help clinicians world-wide to select appropriate candidates for evaluation of treatment efficacy in systemic therapy trials for advanced primary liver cancer. Its adoption will greatly facilitate the effective implementation of such clinical trials worldwide, including those on-going clinical trials at Queen Mary Hospital, and ultimately assist in the development of novel molecular targeting drugs for primary liver cancer.

Clinical trials on new molecular targeting drugs are on-going at Queen Mary Hospital. Any patients with advanced liver cancer in Hong Kong are welcome to join such clinical trials. Interested parties please call Miss Choi at 2855 3635 for more details.

Please visit the website at http://web3.hku.hk/facmed/hkumed/news_list.php for press photos and supplementary information.

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新聞稿

提高晚期肝癌臨床研究成效的嶄新預測指標

香港大學李嘉誠醫學院及瑪麗醫院外科學系最近制訂了一套名為「**晚期肝癌病情預測指標」的計分系統**，用以客觀地為不能接受痊癒性治療的晚期肝癌病人，就其三個月內的生存率作出評估。該計分系統可協助醫護人員選擇合適的晚期肝癌病人參與治療肝癌藥物的臨床測試，從而提高研究成效和協助治療肝癌藥物的開發。

有關「晚期肝癌病情預測指標」的學術論文，已獲美國癌症協會出版的國際醫學期刊《癌症》接納刊登。

原發性肝癌在亞洲發病率高

原發性肝癌在全球癌症中排列第五位，佔全球所有癌症病例的 5.4%。全球的原發性肝癌病例，有超過八成來自亞洲。

肝癌在香港的致命癌症中高居第三位，每年約有 1,600 宗肝癌新病例。乙型肝炎和丙型肝炎病毒感染是引致原發性肝癌的最主要原因。

晚期肝癌的治療方法

現時有效治療肝癌的方法包括肝臟切除、肝臟移植、消融療法(例如：酒精療法、微波、射頻消融和高強度聚焦超聲)和經動脈化療栓塞法。然而大約只有兩成病人是在定期肝癌檢測時發現患有肝癌，並能及時採用痊癒性治療。約有三成病人在確診時已屬於晚期肝癌，不能採用手術或局部性治療方法。

由於原發性肝癌是一種對化療呈抗藥性的癌症，到目前為止並未有任何傳統化療可有效提高肝癌病人的生存率。最近有臨床研究顯示分子標靶療法可以為晚期肝癌病人帶來新希望，目前亦有多種分子標靶藥物正在進行臨床測試。

新計分系統助預測病情及治療

要從新的藥物治療中得益，參與測試的病人必須有合理的預期壽命，才能有足夠時間讓藥物發揮療效。現時大多數的治療晚期原發性肝癌藥物臨床研究，均要求參與病人有三個月以上的預期壽命，讓研究人員能夠客觀地評估藥物的療效。然而，一

些晚期肝癌病人的腫瘤會快速生長，又或其肝臟功能會急速衰退，令他們不能從新藥的測試中獲益。

現有的肝癌分期或病情預測方法，只能提供有限的資料，協助臨床研究人員推斷晚期肝癌病人的生存率，以選擇合資格病人參與藥物研究。由於治療晚期肝癌的藥物正不斷面世，須以臨床測試作評估，故此醫學界必須發展出一套能客觀地為晚期肝癌病人預測病情的計分系統，以便篩選適當的病人參與臨床研究。

由香港大學李嘉誠醫學院及瑪麗醫院外科學系制訂的「**晚期肝癌病情預測指標**」，是根據十一項因素，再按其比重而釐訂。這些因素可歸類為**臨床因素**(包括腹水、腹痛、體重減少)、**肝功能因素**(包括量度肝硬化程度的 Child-Pugh 計分、鹼性磷酸酶、總膽紅素、甲胎蛋白指數、尿素)及**腫瘤因素**(包括門靜脈栓塞、腫瘤體積及肺部轉移)。這套嶄新的預測系統能協助醫生客觀地篩選合適的病人，參與臨床測試，以評估治療晚期肝癌藥物的療效。

結論及新評分系統的重要性

「晚期肝癌病情預測指標」可協助世界各地的醫生客觀地選擇合適的病人，參與臨床測試，以評估治療晚期肝癌藥物的療效。這套評分系統的應用，將協助世界各地，包括正在瑪麗醫院進行的肝癌藥物測試更為有效地進行，並最終有助開發新的分子標靶肝癌藥物。

瑪麗醫院現正進行多個有關分子標靶肝癌藥物的臨床研究，歡迎所有在香港的晚期肝癌病人參加。有興趣參加者可致電蔡姑娘(電話：2855 3635)查詢詳情。

如欲索取補充資料，請瀏覽網址：http://web3.hku.hk/facmed/hkumed/news_list.php。

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