

An anatomical illustration of a human torso, showing the internal organs. The liver is highlighted in a vibrant red color, while the rest of the body and internal organs are rendered in a semi-transparent blue. The background is a gradient of blue.

Enhanced Liver Fibrosis (ELF) assessment test 肝纖維化評估測試



Gleneagles Hospital

HONG KONG

港怡醫院

How would the ELF test benefit patient?

肝纖維化測試能為病人帶來甚麼好處？

Benefits of the test are as follows:

肝纖維化測試的好處如下：

- Identifying of early or significant liver disease.
鑒定初期或嚴重肝疾病
- Allowing cost effective screening test and subsequent review/follow-up response to treatment
以實惠價格篩查肝疾病，同時檢視並跟進治療成效
- Replacing invasive biopsy with minimally-invasive routine serum sample collection
以非入侵性血清測試取代傳統入侵性肝穿刺切片檢查
- Assessing the extent of liver damage by mathematical algorithm objectively
以數學計算方式客觀地評估肝臟受損程度

References

參考資料

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Free Shuttle Service 免費專車服務

Gleneagles Hospital Hong Kong provides free shuttle bus service between MTR **Wong Chuk Hang Station** (Exit A) and the hospital (main entrance).

港怡醫院為市民提供免費專車服務往來港鐵黃竹坑站 (A出口) 及醫院 (正門)。



Free Shuttle Schedule
免費專車服務時間表

MTR 港鐵

Gleneagles is within walking distance from MTR **Ocean Park Station** (Exit C).

您可由港鐵海洋公園站 (C出口) 步行至港怡醫院。

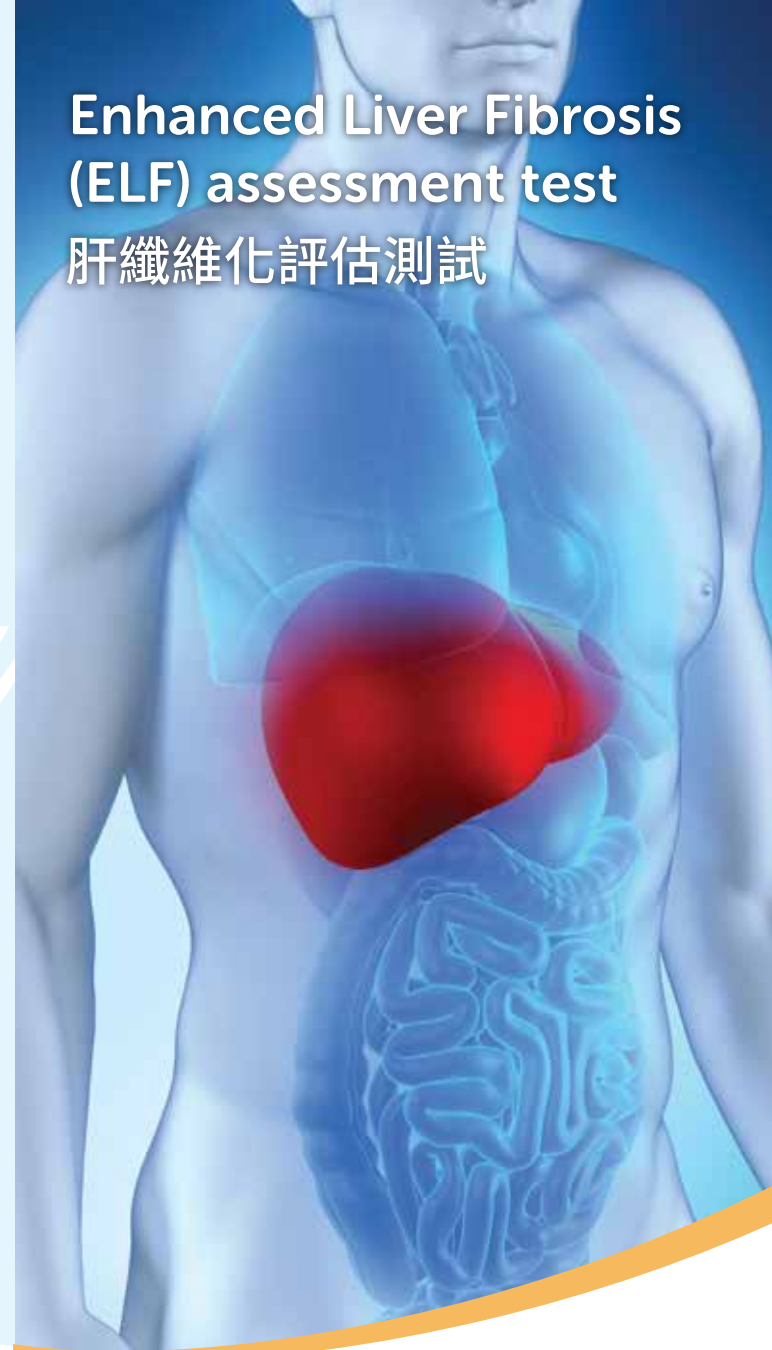


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Enhanced Liver Fibrosis (ELF) assessment test 肝纖維化評估測試




What is ELF test?

甚麼是肝纖維化測試？

Enhanced Liver Fibrosis (ELF) test is a routine blood test used to assess the severity of liver fibrosis. Liver fibrosis is the scarring process that represents the liver's response to injury or disease. Chronic liver disease can lead to liver fibrosis, liver cancer and even death. Cirrhosis and liver cancer are now among the top 10 causes of death worldwide, and in many developed countries, liver disease is now one of the top five causes of death in middle-aged people⁴⁻⁷. There are four main causes of liver fibrosis:

肝纖維化測試是以常規抽血測試去評估肝纖維化的嚴重程度。肝臟在受傷或疾病後恢復過來時的結疤過程會造成肝纖維化。因此長期肝臟病患可導致肝纖維化、肝癌，甚至死亡。肝硬化和肝癌是全球頭十位致命原因之一，而在很多發展國家，肝臟疾病更位列中年人士死亡成因的頭五位⁴⁻⁷。以下是四項常見的肝纖維化成因：

	Fatty liver disease associated with obesity 脂肪肝伴隨癯肥
	Viral hepatitis B and C 乙型及丙型肝炎

	Type II Diabetes / Metabolic Syndrome 二型糖尿病 / 代謝症候群
	Alcohol Abuse 酗酒

What is ELF score?

甚麼是肝纖維化指標？

The ELF score combines three serum biomarkers, which enables the identification of quantifiable level of liver fibrosis upon correlation. Based on the measurement of three biomarkers, the ELF score determines the extent of liver damage^{1-3,12} :

肝纖維化指數由三個血清生物標記組成，再配以專有的方程式，有助量化並判斷肝臟受損程度，從而推算患有肝纖維化的機會^{1-3,12}：

Hyaluronic acid (HA) 玻尿酸
Procollagen III amino terminal peptide (PIIINP) 第三型前膠原N端
Tissue inhibitor of metalloproteinase 1 (TIMP-1) 組織基質金屬蛋白酶抑制劑
$ELF\ score = 2.494 + 0.846 \ln(C_{HA}) + 0.735 \ln(C_{PIIINP}) + 0.391 \ln(C_{TIMP-1})$ <p>Concentrations (C) of each of the constituents are in ng/mL 每種成分的濃度為 ng/mL</p>

Generated with the three aforementioned biomarkers via the algorithm, the ELF score has been proven to correlate to the level of fibrosis as assessed by liver biopsy⁸⁻¹¹. The spectrum of liver disease can range from simple steatosis, to cirrhosis and may be present for many years in the absence of abnormal liver function tests—mild to moderate liver fibrosis can exist without symptoms, which in itself supports its use for early detection and assessment.

由上述三個生物標記所計算的肝纖維化指標，已獲證實可以和肝穿刺切片檢查提供相近結果⁸⁻¹¹。由脂肪肝到肝硬化，以及一些未能於肝功能測試中反映異常的輕微至中度肝纖維化，肝纖維化測試均可作為初步的輔助檢查和監察。

