

For NPC patients who received or completed their treatments
適用於接受或已完成治療的鼻咽癌患者



Take2 Clarity™ Test for NPC Monitoring 鼻咽癌復發風險檢測

A simple blood test designed and validated for better prediction of nasopharyngeal cancer (NPC) recurrence with superior sensitivity

透過抽血進行；經臨床實證，具優越靈敏度，相比傳統檢測，能更準確預測鼻咽癌復發風險

What is Take2 Clarity™ 甚麼是 Take2 Clarity™

The Take2 Clarity™ Test utilises the Next-generation Sequencing (NGS) analysis that allows a more comprehensive, unbiased detection and quantitation of plasma EBV DNA. Through blood drawing, **it provides robust and clinically proven assay performance in the prognostication of NPC patients after treatment.**

Take2 Clarity™ 鼻咽癌復發風險檢測，只須抽血，配合次世代DNA測序技術 (NGS) 的極高靈敏度，相比傳統檢測，可更全面、更精確地進行檢測和分析血漿中的EB病毒DNA含量。**此檢測為接受或已完成治療的鼻咽癌患者，提供了強大且經臨床實證的預後評估表現。**

Technological Breakthrough 技術突破

The conventional qPCR approach has a lower sensitivity for the detection of recurrent NPC, while with the use of the Next-generation Sequencing (NGS) approach, which allows the detection of entire EBV genome, a more sensitive, comprehensive and unbiased detection of plasma EBV DNA molecules can be achieved, bringing the sensitivity of detection of NPC recurrence to the next level.

傳統的qPCR技術用於預測鼻咽癌復發的靈敏度較低；相比之下，使用次世代DNA測序技術 (NGS) ，則可檢驗到EB病毒的全基因組，有助我們更全面、更精準地檢測及分析血漿中的EB病毒的DNA分子，提升靈敏度至更高水平；用於預後評估，有助患者更準確預估鼻咽癌復發風險。

Limitations of Conventional EBV DNA Tests 傳統EB病毒DNA測試局限

Epstein-Barr virus (EBV) infection is highly associated with nasopharyngeal carcinoma (NPC), and previous studies showed that quantitative analysis of plasma EBV DNA was useful for the monitoring and prognostication of NPC, including the prediction of recurrence and progression-free survival. Thus, the concentration of plasma EBV DNA at the end of primary treatment is a common prognostic marker for NPC patients, which is conventionally quantified by the qPCR approach.

EB病毒 (Epstein-Barr Virus, EBV) 感染與鼻咽癌密切相關，而過去研究亦指出血漿內的EB病毒含量分析有效用作鼻咽癌的監測，及包括復發風險和存活期的預估。因此過去鼻咽癌患者在治療完成後，均會透過「EB病毒DNA定量測試」，亦即使用聚合酶鏈式反應 (qPCR) 技術以測量血漿內的EB病毒含量，作為慣常的預後指標。

However, up to 40% of NPC patients who would later develop disease recurrence had undetectable post-treatment plasma EBV DNA on qPCR¹; the sensitivity for prediction of recurrence was low.

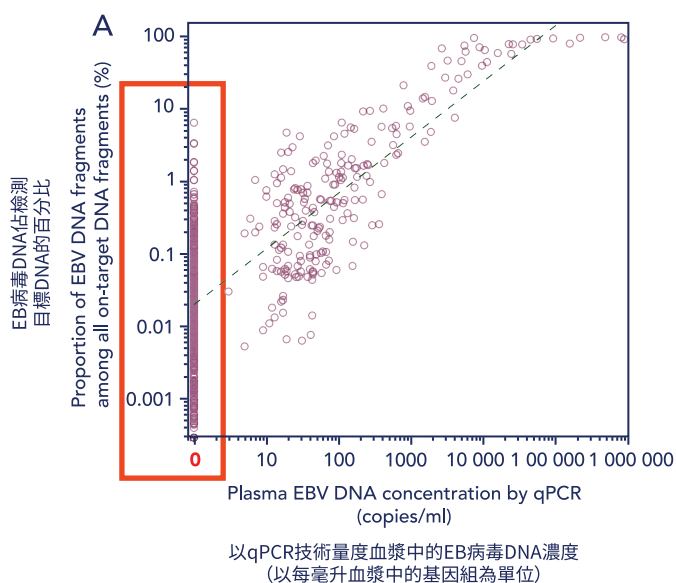
然而，高達40%出現復發的鼻咽癌患者，卻未能透過qPCR技術檢驗出血漿中的EB病毒DNA¹，可見以此方法預測鼻咽癌復發風險的靈敏度較低。

Advanced NGS Technology 嶄新次世代DNA測序技術

I. Achieved high performance 檢測表現卓越

- NGS approach provides better sensitivity for identifying patients with increased risk of recurrence.

技術能以更佳靈敏度，識別較高復發風險的患者。



Samples with an undetectable level of EBV DNA on qPCR had a wide range of EBV DNA proportions on sequencing.

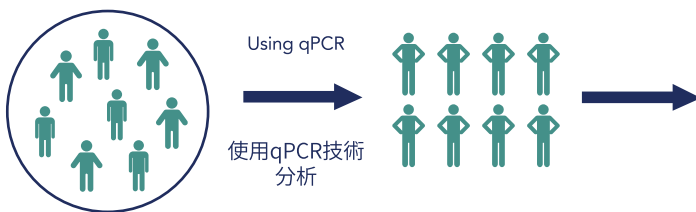
以qPCR技術偵測不到EB病毒DNA的樣本 (可參考圖表標示的紅色「0」字)，利用NGS技術，能進一步檢驗到不同比例的EB病毒DNA (可參考圖表標示紅框的地方)。

II. Improved survival prediction 存活預測表現大幅提升

- Among patients with undetectable EBV DNA by qPCR approach, the sequencing approach could further identify subgroups with different 5-year progression-free survival (PFS) based on the proportion of plasma EBV DNA, with the best possible PFS approaching 90%¹. Providing a more accurate information for patients and doctors' references, through appropriate treatment follow-ups, patients could enjoy better survival outcomes.

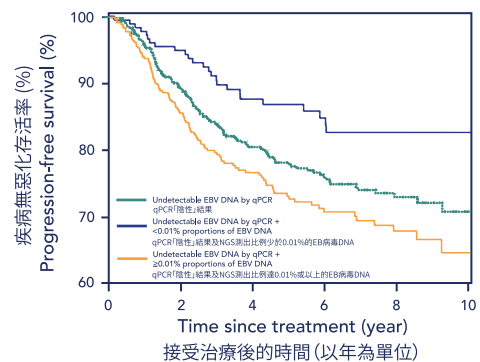
NGS技術能在被qPCR分析評為「陰性」的患者的組別中，按量度到的EB病毒DNA比例把患者進一步細分，最高的五年疾病無惡化存活期 (PFS /「存活期」) 可接近90%¹。參考更準確的數據，醫生能制定合適的治療跟進方案，從而令患者獲得最佳的生存結果。

By qPCR approach 使用qPCR技術



Post-treatment NPC patients
完成治療後的鼻咽癌患者

Patients with low EBV concentration were classified as having an undetectable level of EBV DNA by the qPCR approach
EB病毒濃度處於低水平的患者被區分為檢測不到EB病毒DNA的組別



Since the qPCR approach is less sensitive in detecting EBV DNA molecules at low concentrations, patients might be wrongly predicted to have PFS ~80% in general. 由於qPCR技術於低病毒水平時的靈敏度較低，患者被統一誤判其存活期約為80%

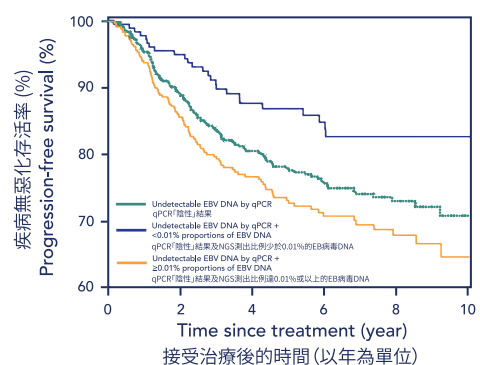
The survival outcomes of NPC patients may not be accurately predicted using qPCR approach
使用qPCR技術或未能準確預測鼻咽癌患者的生存結果

By NGS approach 使用次世代DNA測序技術



Post-treatment NPC patients
完成治療後的鼻咽癌患者

A wide range of EBV DNA proportions was detected by the NGS approach, patients were stratified into different subgroups
NGS技術的高靈敏度可量度出不同EB病毒DNA比例，患者可被區分為不同組別



NGS could further identify subgroups which qPCR could not do so, with respective survival rates indicating the best possible outcome reaching 90%
NGS技術能進一步分辨出qPCR檢測不到的子組別，提供更準確的數據以作參考，而最高的存活期可達90%

The survival outcomes prediction of NPC patients is greatly improved using the NGS approach
使用NGS技術能更準確預測鼻咽癌患者的生存結果

Key Differences between Conventional Test and Take2 Clarity™

Take2 Clarity™ 與傳統測試有何不同？

Comparison of Take2 Clarity™ and other qPCR-based EBV DNA tests:
Take2 Clarity™ 和其他採用qPCR的EB 病毒DNA定量測試比較：

| | Take2 Clarity™ | Other qPCR-based EBV DNA tests 其他採用qPCR的EB 病毒DNA定量測試 |
|---|---|--|
| Technology 採用技術 | NGS 次世代DNA測序技術 | PCR 聚合酶鏈式反應 |
| Detection Target 檢驗項目 | Whole genome of EBV DNA EB病毒的全基因組 | Selected EBV DNA region 特定的EB病毒基因組 |
| Sensitivity 靈敏度 | Higher 較高 | Lower 較低 |
| Prediction Performance 生存結果預測表現 | Able to further define subgroups of patients with different prognoses 有效更細緻的區分患者, 有助進行更準確的預後評估 | Up to 40% of NPC patients who would later develop disease recurrence had undetectable post-treatment plasma EBV DNA on qPCR ¹ 高達40%出現復發的鼻咽癌患者未能透過qPCR技術檢驗出血漿中的EB病毒DNA ¹ |
| Missed NPC Recurrence Cases 漏檢鼻咽癌復發病例 | Fewer 較少 | More 較多 |

Interested in Choosing 如何選用 Take2 Clarity™ Test for NPC Monitoring?

Please consult your doctor for more details.
請向您的主診醫生查詢詳情。

Contact Us 聯絡我們：

General enquiry 電話 : (852) 3613 0536

WhatsApp : (852) 5377 0823

Email 電郵 : customer.support@take2.health

Facebook : Take2 Health

Website : take2health.net

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This test only serves as an aid to doctors' diagnosis, and a referral from registered doctor is required. Please consult your doctor or healthcare professionals for more information.
此測試僅為醫生提供輔助診斷, 並須通過醫生轉介。如有任何疑問, 請向專業醫護人員或您的主診醫生查詢。

Reference 參考資料：

1. Chan, D. C. T., et al. "Improved risk stratification of nasopharyngeal cancer by targeted sequencing of Epstein-Barr virus DNA in post-treatment plasma." *Annals of Oncology*, 2022.