

# SARS-CoV-2 COVID-19 long haul infection TEST

## 超微基因長新冠臟器損傷基因檢測報告(範本)

Patient:	Hospital ID:
Age: 26 歲	Treating Physician:
Sex: Male	Specimen ID:
Order Received: 2023/6/	Sampling Date: 2023/6/

Lab Requisition #: PASC#
Specimen Type: Touch Exosome DNA
Date Reported:
Clinical Indication:

### RESULTS: SARS-CoV-2 MOLECULAR ASSAY WITH RISK ASSESSMENT

#### 新冠病毒分子測定核糖核酸 DNA 風險評估

	RNA	DNA	RISK LEVEL 風險等級
Viral Burden 病毒量	-	++	INTERMEDIATE 中度風險
Implication 含意	No Active Infection 無活躍性感染	Post-Acute Infection 急性感染後期	

"-": Not detectable 未偵測出

"+": Low Level 低度風險

"++": Intermediate Level 中度風險

"+++": High Level 高度風險

### INTERPRETATION

INTERMEDIATE VIRAL LOAD POST COVID-19 ACUTE INFECTION COVID-19 急性感染後偵測到體內存留有中等病毒載量
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### IMMUNE FUNCTION ASSESSMENT(免疫功能評估)

RISK GENE 風險基因	SIRTUIN	GRANZYME B	S100B	S100A12
Expression 基因表達等級	-	+	-	-
Functionality 功能性	Immune homeostasis 免疫穩態	Immuno-suppression 免疫抑制	Systemic inflammation 全身炎症	Pro-inflammation 促炎

"-": Not detectable 未偵測出

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"++": Intermediate Level 中度風險

"+++": High Level 高度風險

## INTERPRETATION

<p><b>EARLY RISK OF IMMUNOCOMPROMISATION</b></p> <p>免疫功能不全早期風險</p>
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### ACCELERATED BRAIN AGING (加速大腦衰老)

	BRAIN BIOAGE 腦齡	PHYSIOLOGICAL BIOAGE 生理生物年齡
BIOMARKER 生物標誌物	S100B	IGF1
	BRAIN BIOAGE = 29 ±1	PHYSIOLOGY AGE = 25 ±1

\* S100B senescence denotes an accelerated brain aging, whereas IGF1 senescence denotes an accelerated bodily aging process induced by chronic stress and various inflammation stimuli. Cellular senescence can result in irreversible tissue damage and organ dysfunction.

\* S100B 衰老表示加速大腦衰老，而 IGF1 衰老表示由慢性壓力和各種炎症刺激引起的加速身體衰老過程。細胞衰老可導致不可逆的組織損傷和器官功能障礙。

### ORGAN-SPECIFIC INFLAMMATION ASSESSMENT (器官特異性炎症評估)

INFLAMMATION 炎症	ORGAN							
	LUNG 肺	MESOTHELI OMA 間皮	COLON 結腸	GASTRIC 胃	ESOPHAGUS 食道	BLADDER 膀胱	TESTES 睪丸	PROSTATE 前列腺
EXTENSIVENESS 廣泛性	(±±)	-	(±)	(±)	-	-	-	-

INFLAMMATION 炎症	ORGAN							
	LIVER 肝	CHOLANGIOC ARCINOMA 膽管	PANCREAS AMPULLA 胰、壺腹	THYROID 甲狀腺	NET 神經內分泌	KIDNEY 腎	NSP 鼻咽	LYMPHOMA 淋巴
EXTENSIVENESS 廣泛性	-	-	-	-	-	(±±±)	-	(±±)

\*當特定臟器侵略性欄位為“(±)”時，該臟器目前已呈現輕度慢性炎症。

\*當特定臟器侵略性欄位為“(±±)”時，該臟器目前已呈現中度慢性炎症。

\*當特定臟器侵略性欄位為“(±±±)”時，該臟器目前已呈現重度慢性炎症。

### KIDNEY FILTRATION FUNCTION ASSESSMENT (腎臟濾過功能評估)

RISK GENES 風險基因	xL (expression level)	C-SCORE	RANGE
CYSTATIN-C	4.5	35	0 ~ 100

\*C-Score=100(1-Log[XL])

(C-SCORE 評估範圍 0 至 100 分)

0-12: STAGE 5, 極度風險

13-24: STAGE4, 高度風險

25-49: STAGE 3, 中度風險

50-74: STAGE 2，低度風險

75-100: STAGE 1 正常

## INTERPRETATION

### SYSTEMIC INFLAMMATION AND OVERSTRESS

#### 檢出全身炎症和過度壓力

#### PRINCIPLES

The PASC SARS-CoV-2 Assay is a nucleic acid probe hybridization test for patients who are suspected of long COVID with signs and symptoms of post-acute sequelae of COVID-19. The nucleic acid probe encompassing 100bp can be mapped to COV-19 viral genome from 15,431 to 15,530bp with 100% sequence identity.

PASC SARS-CoV-2 檢測是一種核酸探針雜交測試，適用於疑似患有長新冠且具有 COVID-19 急性後遺症癥狀的患者。包含 100bp 的核酸探針可以映射到 15,431 至 15,530bp 的 COV-19 病毒基因組，具有 100% 的序列一致性。

The assay is intended to detect both DNA and RNA derived from the SARS-CoV-2 genome in the exosome samples semi-quantitatively.

該測定旨在半定量檢測外泌體樣品中源自 SARS-CoV-2 基因組的 DNA 和 RNA。

The SARS-CoV 2 can persist in gastrointestinal, hepatic, kidney or lung tissue beyond the acute symptomatic phase. The post-acute sequelae of COVID-19 (PASC) are estimated to affect at least 20% of the individuals infected with SARS-CoV 2 regardless of their acute disease severity. The residual COVID-19 viral RNA is generally detectable in the sweat exosomes on the finger pad during the PASC phase of COVID-19 infection. Positive results are indicative of the presence of endogenous SARS-CoV 2 viruses, which can lead to long haul COVID-19 infection. Negative results do not preclude COVID-19 infection and should not be used as the sole basis for patient management decisions.

SARS-CoV 2 可以在急性癥狀期之後的胃腸道、肝臟、腎臟或肺組織中持續存在。據估計，無論其急性疾病嚴重程度如何，COVID-19(PASC) 的急性後遺症至少影響 20% 的 SARS-CoV 2 感染者。在 COVID-19 感染的 PASC 階段，殘留的 COVID-19 病毒 RNA 通常可在手指表皮的汗液外泌體中檢測到。陽性結果表明存在內源性 SARS-CoV 2 病毒，這可能導致長期 COVID-19 感染。陰性結果不能排除 COVID-19 感染，不應作為患者管理決策的唯一依據。

#### COMMENTS

SARS-CoV-2 DNA/RNA PASC TEST is a molecular COVID-19 test and can be used as a screening for post COVID-19 long haul infection. The test is intended to be an ancillary test and should be used in conjunction with other clinical diagnostic procedures for any medical decisions. Like other laboratory tests, SARS-CoV-2 DNA/RNA PASC TEST must be ordered by an authorized healthcare provider.

SARS-CoV-2 DNA/RNA PASC 測試是一種分子 COVID-19 測試，可用作 COVID-19 後長期感染的篩查。該測試旨在作為輔助測試，應與其他臨床診斷程序結合使用，以做出任何醫療決策。與其他實驗室測試一樣，SARS-CoV-2 DNA/RNA PASC 測試必須由授權的醫療保健提供者訂購。

\*\*Deviations from the “Sample Collection Procedure” recommended for the SARS-CoV-2 DNA/RNA PASC TEST may compromise the assay accuracy.

\*\*偏離 SARS-CoV-2 DNA/RNA PASC 檢測建議的“採樣程序”可能會影響分析準確性

Sign: **BING LING, MD**

Date: **2023//**