# ONCONOSTICS ASSAY MOLECULAR MALIGNANCY ANALYSIS 超微癌速測報告 (範本)

Patient:	Hospital:
Age: 53 歲	Treating Physician:
Sex: Male	Specimen ID:
Order Received: 2023/12/	Sampling Date: 2023/12/

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

#### **RESULTS:**

#### ORGAN VULNERABILITY & RISK ASSESSMENT(臟器脆弱性及風險評估)

	ORGAN							
MALIGNANCY	LUNG Squamous 肺	MESOTHE LIOMA 間皮	COLON 結腸	GASTRIC 買	ESOPHAGUS 食道	BLADDER 膀胱	<b>TESTES</b> 睾丸	<b>PROSTATE</b> 前列腺
Aggressiveness* 侵略性	(±)	-	-	(±)	-	-	-	-
Distant** Metastasis 遠距轉移	-	-	-	-	-	-	-	-

	ORGAN							
MALIGNANCY	LIVER 肝	CHOLANGIO CARCINOMA 膽管	PANCREAS AMPULLA 胰、壺腹	<b>THYROID</b> 甲狀腺	NET 神經內分泌	KIDNEY 腎	NSP 鼻咽	LYMPHO MA 淋巴
Aggressiveness* 侵略性	±	-	-	-	-	-	-	-
Distant** Metastasis 遠距轉移	-	-	-	-	-	-	-	-

\*當特定臟器侵略性欄位為"(±)"時,該臟器目前已呈現慢性炎症.

\*當特定臟器侵略性欄位為"±"時,該臟器目前已呈現慢性增殖, "癌變風險" <30%.

\*當特定臟器侵略性欄位為"+"時,該臟器目前已呈現快速增殖,"癌變風險"≥30%.

\*當特定臟器侵略性欄位為"++"時,該臟器目前已呈現惡性增殖, "癌變風險"≥60%.

\*當特定臟器侵略性欄位為"+++"時,該臟器目前已呈現持續惡性增殖,"癌變風險"≥90%.

\*\*當特定臟器遠距轉移欄位為"+"時,該臟器目前已出現遠距轉移,"多發轉移風險"≤60%.

\*\*當特定臟器遠距轉移欄位為"++"時,該臟器目前已出現遠距轉移,"多發轉移風險">60%.

LIVER IS CURRENTLY THE MOST VULNERABLE ORGAN AT RISK FOR LOW-GRADE TUMOR GROWTH "肝臟"是目前最脆弱的器官,有低度惡性腫瘤生長的風險

面的CMC的这些特例和LL的「「「」的「CMC的自用」」[17]。2019年9月 - 少效特例

#### **ORGAN VULNERABILITY**

#### DEPRESSION INDEX 抑鬱指數

BIOMARKER	PERIPHERAL EXPRESSION LEVEL
SORL1	4.0

Sortilin is closely associated with the pathogenesis of MDD, and its expression level correlates with the severity of exacerbation in mood disorders. Mood disorders can lead to irreversible vascular and brain damage.

Sortilin 與 MDD 的發病機制密切相關,其表達水準與心境障礙加重的嚴重程度相關。情緒障礙可導致不可逆的血管和腦損傷。

No or Mild Depression: Level 0 and 1 (無抑鬱或輕度抑鬱:0 級和1級)

Moderate Depression: Level 2, 3 and 4 (中度抑鬱: 2、3 和 4 級)

Major Depression: Level 5, 6 and 7 (重度抑鬱症: 5、6 和 7 級)

# OVERALL RISK ASSESSMENT(風險全面評估)



## INTERPRETATION



分子病理五期 (Molecular Pathological Stage V): 癌變發展三期,惡性腫瘤後期風險 分子病理四期 (Molecular Pathological Stage IV): 癌變發展二期,惡性腫瘤中期風險 分子病理三期 (Molecular Pathological Stage III): 癌變發展一期,惡性腫瘤初期風險 分子病理二期 (Molecular Pathological Stage II): 亞健康,惰性腫瘤風險 分子病理一期 (Molecular Pathological Stage I): 健康,無風險

#### RECOMMENDATION

MOLECULAR ONCOLOGY TEST FOR EVERY 6 MONTHS

建議每6個月作一次全面惡性腫瘤檢測

## PRINCIPLE

OncoNostics Assay is a pan-cancer risk analysis for wide-ranging selected organs. The testing panel covers a spectrum of biomarkers related to genome stability, tumor initiation, proliferation, migration, invasion, apoptosis, EMT, metastasis and immune evasion. Test results are presented as a composite index to underscore the critical molecular stages associated with cancer development. OncoNostics 檢測是針對廣泛選定器官的泛癌症風險分析。該測試涵蓋了與基因組穩定性、腫瘤 起始、增殖、遷移、侵襲、細胞凋亡、上皮間質轉化、轉移和免疫逃避相關的一系列生物標誌 物。測試結果以綜合指數的形式呈現,以強調與癌症發展相關的關鍵分子階段。

The assay analyzes the differential DNA energetics using exosome DNA derived from finger touch samples and has been cross checked for its real-time clinical performance with validated clinical samples as shown in the table below.

該測定使用源自手指觸摸樣本的外泌體 DNA 分析差異 DNA 能量學,並已與經過驗證的臨床樣 本交叉檢查其實時臨床性能,如下表所示。

## PERFORMANCE CHARACTERISTICS

OncoNostics Assay		VALIDATE	TOTAL	
		POSITIVE	NEGATIVE	TOTAL
OncoScore	< 65	866	4	870
	≥ 65	12	898	910
ΤΟΤΑ	L	878	902	1780
Sensitivity: 98.6% S		pecificity: 99.5%	PPV: 99.5%	NPV: 98.7%
靈敏度		特異性	陽性預估值	陰性預估值

Clinical performance is based on a validated study with patients aged between 25 to 75 years old.

#### COMMENTS

OncoNostics Assay is a pan-cancer test and can be used as a first-line screening for at least 16 types of cancer. The specificity of the test is 99.5% based on an in-house clinical study with validated cancer patients. Under optimal condition, the NPV and PPV of OncoNostics Assay are 98.7% and 99.5%, respectively.

OncoNostics 檢測是一種泛癌症測試,可用作至少 16 種癌症的一線篩查。根據對經過驗證的癌症患者的內部臨床研究,該測試的特異性為 99.5%。在最佳條件下,腫瘤檢測的 NPV 和 PPV 分別為 98.7%和 99.5%。

\*Onconostic Test should be used in conjunction with additional clinical diagnostic procedures for any medical decisions. Like other laboratory tests, OncoNostic Test must be ordered by an authorized healthcare provider. \* OncoNostic Test應與其他臨床診斷程序結合使用,以做出任何醫療決定。如同其他測試, OncoNostic Test 須由授權的醫療保健院所建議使用。

\*\*Deviations from the "Sample Collection Procedure" recommended for the Onconostic Test may compromise its overall accuracy.

\*\*偏離 Onconostic Test 檢測所規範的"採樣操作步驟"可能會影響其整體準確性。

# Sign: BING LING, MD

## Date: 1/5/2024

#### REFERENCE

- Wujun Chen, Shuai Wang, Dongming Xing, New Horizons for the Roles and Association of APE1/Ref-1 and ABCA1 in Atherosclerosis. Received: 19 July 2021 Accepted: 25 September 2021 Published: 14 October 2021; Journal of Inflammation Research 2021:14
- Thais Teixeira Oliveira, Leonam Gomes Coutinho, Laysa Ohana Alves de Oliveira, Ana Rafaela de Souza Timoteo, Guilherme Cavalcanti Farias and Lucymara Fassarella Agnez-Lima, APE1/Ref-1 Role in Inflammation and Immune Response. Received: 11 October 2021 Accepted: 07 February 2022 Published: 28 February 2022; Frontiers in Immunology February 2022 | Volume 13 | Article 793096
- 3. Giovanna Mangiapane, Isabella Parolini, Kristel Conte, Matilde Clarissa Malfatti, Jessica Corsi Massimo Sanchez, Agostina Pietrantoni, Vito G. D'Agostino, and Gianluca Tell, enzymatically active apurinic/apyrimidinic endodeoxyribonuclease 1 is released by mammalian cells through exosomes. Received for publication, October 16, 2020, and in revised form, March 11, 2021 Published, Papers in Press, March 19, 2021,
- Sunga Choi, Yu-Ran Lee, Ki-Mo Kim, Euna Choi and Byeong-Hwa Jeon, Dual Function of Secreted APE1/Ref-1 in TNBC Tumorigenesis: An Apoptotic Initiator and a Regulator of Chronic Inflammatory Signaling. Received: 8 July 2022, accepted: 9 August 2022, Published: 12 August 2022,
- 5. Ielizaveta Gorodetska, Iryna Kozeretska, Anna Dubrovska, BRCA Genes: The Role in Genome Stability, Cancer Stemness and Therapy Resistance. Received: 2018.10.04; Accepted: 2019.02.20; Published: 2019.05.14
- 6. Xuehui Wang, Minghui Chen, and Lin Fang, hsa\_circ\_0068631 promotes breast cancer progression through c-Myc by binding to EIF4A3. Received 2 March 2021; accepted 2 July 2021;

- Zheng Chen, Yingjie Guo, Da Zhao, Quan Zou, Fusheng Yu, Lijun Zhang and Lei Xu, Comprehensive Analysis Revealed that CDKN2A is a Biomarker for Immune Infiltrates in Multiple Cancers. Received: 03 November 2021, accepted: 06 December 2021, Published: 23 December 2021
- Li Su, Hanwei Wang, Jingwei Miao& Ying Liang, Clinicopathological Significance and Potential Drug Target of CDKN2A/p16 in Endometrial Carcinoma. received: 30 March 2015, accepted: 30 June 2015, Published: 18 August 2015
- Francesca Ida Montalto and Francesca De Amicis, Cyclin D1 in Cancer: A Molecular Connection for Cell Cycle Control, Adhesion and Invasion in Tumor and Stroma. Received: 1 November 2020; Accepted: 6 December 2020; Published: 9 December 2020
- Koji Takada, Shinichiro Kashiwagi, Yuka Asano, Wataru Goto, Rika Kouhashi, Akimichi Yabumoto, Sae Ishihara, Tamami Morisaki, Masatsune Shibutani, Hiroaki Tanaka, Kosei Hirakawa and Masaichi Ohira, Prediction of distant metastatic recurrence by tumor-infltrating lymphocytes in hormone receptor-positive breast cancer. Received: 15 February 2021 Accepted: 24 May 2021 Published online 29 May 2021
- 11. Yong Xia, Yan Liu, Chao Yang, Diane M. Simeone, Tung-Tien Sun, David J. DeGraff, Moon-shong Tang, Yingkai Zhang & Xue-Ru Wu, Dominant role of CDKN2B/p15INK4B of 9p21.3 tumor suppressor hub in inhibition of cell-cycle and glycolysis. Received: 18 February 2020; Accepted: 11 March 2021; Published online 06 April 2021
- 12. Ellis Tibbs and Xuefang Cao, Emerging Canonical and Non-Canonical Roles of Granzyme B in Health and Disease. Received: 11 February 2022; Accepted: 8 March 2022; Published: 10 March 2022
- Morgan S. Schrock, Jenna R. Karras, Matthew J. Guggenbiller, Teresa Druck, Bahadir Batar, Kay Huebner, Fhit and Wwox loss-associated genome instability: genome caretaker one-two punch. Published in final edited form as: Adv Biol Regul. 2017 January; 63: 167–176. doi: 10.1016/j.jbior.2016.09.008.
- 14. Satoshi Miuma, Joshua C. Saldivar, Jenna R. Karras, Catherine E. Waters, Carolyn A. Paisie, Yao Wang, Victor Jin, Jin Sun, Teresa Druck, Jie Zhang, Kay Huebner, Fhit Deficiency-Induced Global Genome Instability Promotes Mutation and Clonal Expansion. Received July 2, 2013; Accepted October 7, 2013; Published November 14, 2013
- 15. Jenna R. Karras Morgan S. Schrock Bahadir Batar Kay Huebner, Fragile Genes That Are Frequently Altered in Cancer: Players Not Passengers. Cytogenet Genome Res 2016; 150:208–216 Published online: February 16, 2017
- 16. Min A Kim, Hyuk-Joon Lee, Han-Kwang Yang, Yung-Jue Bang & Woo Ho Kim, Heterogeneous amplification of ERBB2 in primary lesions is responsible for the discordant ERBB2 status of primary and metastatic lesions in gastric carcinoma. Histopathology 2011, 59, 822–831. DOI: 10.1111/j.1365-2559.2011. 04012.x Date of submission 12 June 2010; Accepted for publication 15 December 2010
- Xiaobing Wu, Maoni Guo, Jian Cui, Haoyang Cai3 and San Ming Wang, Heterozygotic Brca1 mutation initiates mouse genome instability at embryonic stage. Oncogenesis (2022) 11:41; Received: 20 December 2021 Revised: 7 July 2022 Accepted: 11 July 2022; Published online: 22 July 2022
- Meghna M. Baruah a, Neeti Sharma, miR-221 regulates proliferation, invasion, apoptosis and progression of prostate cancer cells by modulating E-cadherin/Wnt/β catenin axis. Received 13 April 2021; Received in revised form 30 June 2021; Accepted 30 June 2021; Available online 1 July 2021
- Yuan-Ke Liang, Hao-Yu Lin, Xiao-Wei Dou, Min Chen, Xiao-Long Wei, Yong-Qu Zhang, Yang Wu, Chun-Fa Chen, Jing-Wen Bai, Ying-Sheng Xiao, Yu-Zhu Qi, Frank A. E. Kruyt and Guo-Jun Zhang, MiR-221/222 promote epithelialmesenchymal transition by targeting Notch3 in breast cancer cell lines. Received: 27 January 2018 Revised: 26 June 2018 Accepted: 29 June 2018; Published online: 06 August 2018
- Weinan Wang, Rui Zou, Ye Qiu, Jishuang Liu, Yu Xin, Tianzhu He, and Zhidong Qiu, Interaction Networks Converging on Immunosuppressive Roles of Granzyme B: Special Niches Within the Tumor Microenvironment. Received: 21 February 2021; Accepted: 15 March 2021; Published: 01 April 2021
- 21. Xuehui Wang, Minghui Chen, and Lin Fang, hsa\_circ\_0068631 promotes breast cancer progression through c-Myc by binding to EIF4A3. Received 2 March 2021; accepted 2 July 2021; Molecular Therapy: Nucleic Acids Vol. 26 December 2021
- 22. Guergana Tchakarskaa and Brigitte Sola, The double dealing of cyclin D1. Received 7 October 2019; Revised 7 November 2019; Accepted 18 November 2019; CELL CYCLE 2020, VOL. 19, NO. 2, 163–178