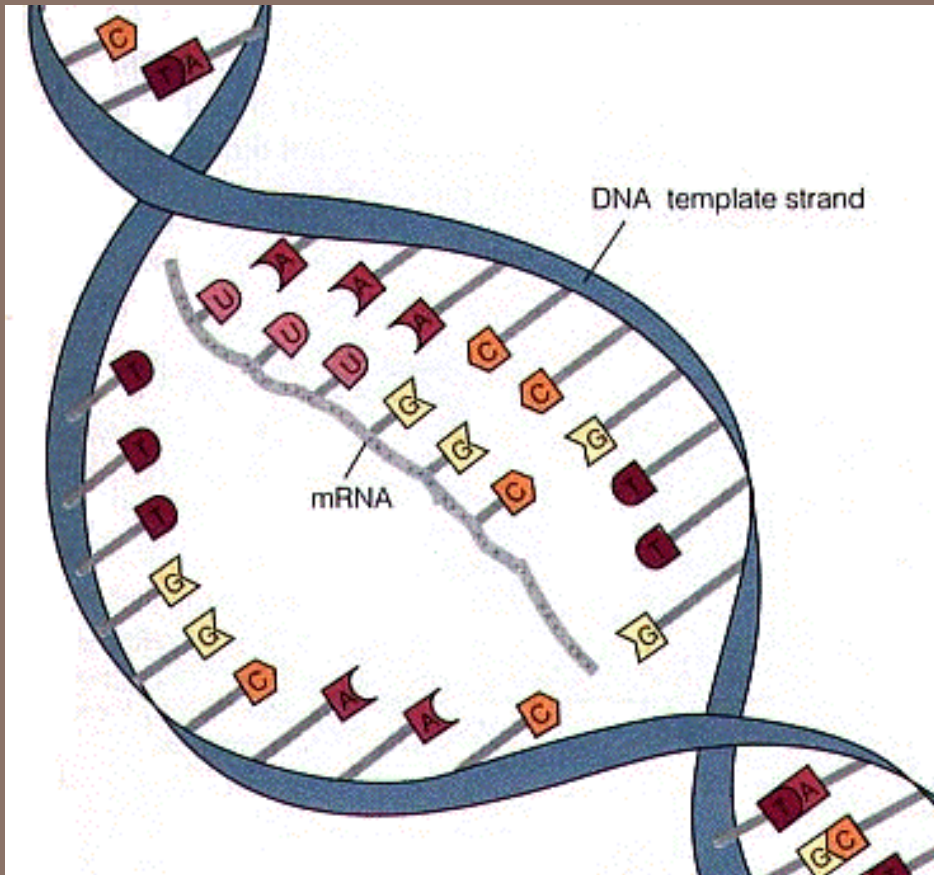




專利(mRNA) 訊息核糖核酸 癌症基因篩檢

癌細胞照妖鏡

癌症篩檢機轉

- 癌症是目前人類健康最大的威脅，近幾年生物醫學的研究，已使得其複雜致病機轉，及其中參與調控的基因，一一被揭密。
- 腫瘤成長至二毫米大小時，即需要有血管新生以供應養分，此時癌細胞即可進入血液循環中而導致轉移，據估算一克的腫瘤每天會有一百萬個癌細胞進入血液中！
- 運用訊息核糖核酸(mRNA)來偵測血液中的癌細胞，是目前最具敏感性及準確性的方法。
- 細胞的所有生理功能，必須透過基因轉錄成訊息核糖核酸(mRNA)，再轉譯成蛋白質來執行。因此若在血液中偵測到癌細胞特有的訊息核糖核酸(mRNA)，即能證明血液中存在具有生理活性的癌細胞。

mRNA癌症基因檢測

- 依據已發表的醫學文獻，此方法的敏感度，可達在數個正常細胞中偵測到一個癌細胞！準確性在結合多個分子標記下，可達百分之九十！
- 針對國人常見的大腸直腸癌、乳癌、肺癌、肝癌、胃癌；
- 高雄醫學大學基因體醫學研究中心領先全國醫學中心，研發出結合癌細胞轉移活性標記及癌症特異性標記的訊息核酸(mRNA)檢測
- 可幫助醫師或病人決定選擇何種治療方式或藥物，提供更靈敏準確的預後追蹤依據，並進而提高現今癌症的治療成績。

mRNA 癌症基因檢測-項目

<u>癌症種類</u>	<u>轉移活性標記</u>	<u>特異性標記</u>
大腸癌	CK-19•hTERT	CK20•CEA
胃癌	CK-19•hTERT	Muc1•c-met
肺癌	CK-19•hTERT	hnRNP-B1•C-met
肝癌	CK-19•hTERT	C-met •AFP
乳癌	CK-19•hTERT	Mammoglobin

mRNA癌症基因篩檢-適應症

□ 適應症

- ▣ 自我保健: 35歲以上定期檢查的民眾

- ▣ 高危險群

- B/C型肝炎緩者 或 帶原者
- 長期抽煙, 喝酒, 生活作息不正常
- 癌症家族史
- 患有大腸息肉, 乳房纖維囊腫, 久咳不癒
- 長期情緒壓力, 睡眠不足, 過勞者
- 臨床被高度懷疑患有癌症但尚未確診者
- 手術, 化放療後評估與追蹤復發轉移者

- ▣ 特殊治療前

- 幹細胞回春術
- 生長因子 或 特殊賀爾蒙治療者

治療
評估

癌症
篩檢

追蹤

或復發

定期
追蹤

確認
診斷

癌症這麼
難被發現，
那我會不會...??

上回動過手術後，
最近又覺得不舒服，
該不會**復發**...??

接受化療真的
好痛苦喔！到底
療效如何...??

做完乳房切除
就好了嗎？癌細胞
會不會**轉移**？另一
邊的乳房會不會也
...??



男性
20歲
健康人
無任何
腫瘤病史



女性
50歲
三年前罹患
胃癌並進行
手術治療



男性
45歲
肺癌末期
正接受化
療治療中



女性
35歲
乳癌患者
剛完成左邊
乳房切除手術

檢測技術

- 利用循環性癌細胞檢測技術 (Circulating Tumor Cells, 簡稱CTCs)
- 透過癌細胞成長到0.2公分有新生血管現象時來抽血檢測，以membrane array及HTP Q-PCR array（高通量同步定量-聚合酶連鎖反應）兩大技術平台，可同時高通量快速的檢測數百項分子標記
- 有別於傳統的影像醫學檢查，要在腫瘤已形成看的到時才檢測的出來
- 此套CTCs循環性癌細胞檢測可在癌組織還未形成前，只是癌細胞時即可偵測出來。癌症的成長過程非常緩慢，要早期發現癌症，唯有定期追蹤檢測。

文獻發表-1

Journal of Surgical Research 120, 242–248 (2004) doi:10.1016/j.jss.2003.12.018

Alterations of APC, c-met, and p53 Genes in Tumor Tissue and Serum of Patients with Gastric Cancers

Jaw-Yuan Wang,^{*,†} Jan-Sing Hsieh,^{*} Chung-Chi Chen,[†] Wen-Shyong Tzou,[‡] Tien-Lu Cheng,^{†,§} Fang-Ming Chen,^{*,†} Tsung-Jen Huang,^{*} Yu-Sheng Huang,^{*} Sung-Yu Huang,[¶] Tzufen Yang,[¶] and Shiu-Ru Lin^{*,1,2}

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ONCOLOGY

Laboratory/Clinical Translational Research

Combination of Multiple mRNA Markers (PTTG1, Survivin, UbcH10 and TK1) in the Diagnosis of Taiwanese Patients with Breast Cancer by Membrane Array

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文獻發表-2



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CANCER
Letters

www.elsevier.com/locate/canlet

High frequency of frameshift mutation on p53 gene in Taiwanese with non small cell lung cancer

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CANCER
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Simultaneous detection of multiple mRNA markers CK19, CEA, c-Met, Her2/neu and hMAM with membrane array, an innovative technique with a great potential for breast cancer diagnosis

Chung-Chi Chen^a, Ming-Feng Hou^b, Jaw-Yuan Wang^{a,b}, Tsai-Wang Chang^c,
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文獻發表-3

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CRITICAL CARE PHYSICIANS, AND RELATED SPECIALISTS

Overexpression of Circulating c-Met Messenger RNA Is Significantly Correlated With Nodal Stage and Early Recurrence in Non-Small Cell Lung Cancer

Tian-Lu Cheng, Mei-Yin Chang, Sung-Yu Huang, Chau-Chyun Sheu, Eing-Long
Kao, Yu-Jen Cheng and Inn-Wen Chong
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