CRYOLIFE
跨奧 | 臍帶血庫
Since 1996

會員專訊

Newsletter 2021

第1季 | H1

臍帶血能治療什麼？
WHAT CAN CORD BLOOD TREAT ?

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CRYOLIFE Company Limited
實驗室及儲存中心 Lab & Storage Centre 香港沙田小瀝源安耀街 3 號匯達大廈 511-518 室 5/F, Delta House, 3 On Yiu Street, Siu Lek Yuen, Shatin, Hong Kong
熱線 Hotline | 香港 Hong Kong +852 2110 2121 | 澳門 Macau +853 6299 3635 | 中國 China +86 136 3217 2032 | 400 842 8065
cryolife@cryolife.com.hk Cryolife Hong Kong CRYOLIFE 跨奧臍帶血庫 香港跨奧臍帶血庫 Cryolife.hk
傳真 Fax: +852 2110 9199 www.cryolife.com.hk

LIGHTMAC 呈獻

~ Medical Skincare Centre ~

YOUR ENDLESS BEAUTY

獎勵產後媽媽 ⊙ 為未來打氣

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可預約親臨任何Lightmac分店尊享以下華麗蛻變禮遇

免費體驗 4 選 1 產後療程

產後6個月內享用

選擇1

｜緊緻私密｜

EMSELLA
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盆底肌肉組織強化療程

(價值 HK$5,000)

強化及鍛鍊盆底肌肉，
預防產後尿頻、
尿滲問題，緊緻私密

選擇2

｜解決肚紋｜

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嫩膚療程

(價值 HK$6,000)

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提升代謝，
改善凹凸疤痕，
緊膚同時嫩膚

選擇3

｜亮肌保養｜

皮秒激光
均色面部療程

(價值 HK$6,000)

較傳統激光快1000倍，
瓦解黑色素，改善膚質，
膚色均勻，亮白自然

選擇4

｜美眼保養｜

超聲波射頻
眼部收緊療程

(價值 HK$5,500)

刺激膠原再生，
改善黑眼圈、眼袋、
浮腫及撫平眼紋

條款及細則：

1. 以上禮遇只適用於CRYOLIFE跨奧年滿21歲，並首次光臨Lightmac的產後媽媽，每人只限享用一次。
2. 以上禮遇須於產後6個月內享用，逾期無效。
3. 客人享用此禮遇前必須預約。
4. 客人必須向Lightmac出示身份證登記。
5. 療程現金折扣只適用於體驗療程當日使用，逾期無效。
6. 療程現金折扣不適用於醫生主理之療程，脫墨、脫疣，及不可與其他優惠同時使用。
7. 以上優惠不可兌換現金或貨品，不可轉讓及不設找贖。
8. 優惠期有限，並受條款及細則約束。
9. 如有任何爭議，Lightmac 及 CRYOLIFE跨奧保留最終決定權。
10. 療程現金折扣須經CRYOLIFE跨奧蓋印簽發方為有效。

LIGHTMAC ~ Medical Skincare Centre ~ **香港分店地址及預約電話:**

九龍尖沙咀海港城世界商業中心9樓901室	3105 9568
九龍尖沙咀諾士佛臺10號14樓	3188 3500
香港銅鑼灣告士打道280號世貿中心3602-03室	2882 0060
香港銅鑼灣羅素街38號金朝陽中心37樓	2890 6326

管教的奧妙
SUCCESSFUL PARENTING SECRETS

「愛幫忙的孩子」
"A CHILD WHO LOVES TO HELP"

在一個小學低年級的活動中，老師希望各同學分享一天中感到最快樂的事。
小朋友們都不約而同地說「我今天當選了班長，感到很開心。」
「今天最快樂的是老師挑選我成為科長。」。
明明就增添了自己的工作，為何這些小朋友會覺得是最快樂的事呢？

In an activity in the lower grades of primary school, the teacher wants the students to share the happiest things they feel during the day. The children all said that, “I was very happy to be elected monitor today.” "The happiest thing today is that the teacher chose me to be the section chief."
Why do these children feel the happiest while their workload is heavier ?

1. 得到成人的認同和肯定
Receive recognition and affirmation from adults

2. 獲得控制權
Gain a sense of control

3. 角色帶點挑戰
Roles bring a sense of challenge and achievement

4. 多讚賞
Much appreciation

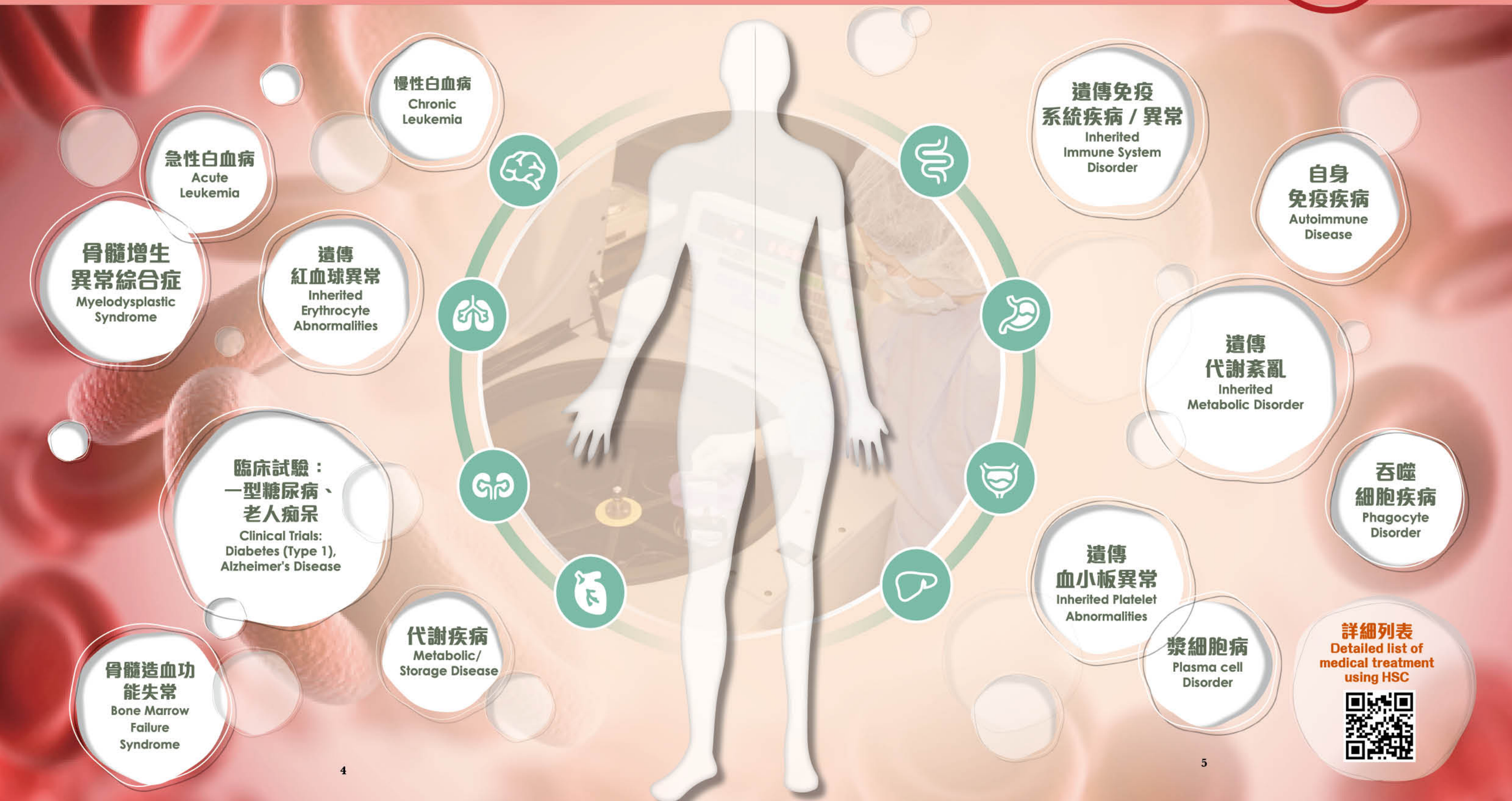
5. 培養責任感，分工合作
Cultivate a sense of responsibility and division of labour and cooperation

Scan QR code for full story
掃一下看全文

由 CARE & BEYOND 提供

臍帶血能治療什麼？
What Can Cord Blood Treat ?

在此給您全面的解答
Here we give you a comprehensive view to answer your question.



2020 年 10 -12 月品質檢定 (細胞活躍測試結果)
Oct - Dec 2020 Quality Assurance (Variability Results)

全面檢測 • 信心保證

CRYOLIFE 每年進行兩次品質檢定，從每個儲存缸內抽取最少一個樣本，進行全面而透明度高的檢測，顯示 CRYOLIFE 對實驗室儀器及專業技術人員的信心，測試結果亦會於在網頁上公佈。

一般幹細胞儲存庫都會作「解凍後幹細胞恢復之存活能力」測試，確保幹細胞解凍後仍具備理想的機能。不過，對 CRYOLIFE 而言，這只是最基本的測試，CRYOLIFE 更注重完整保存幹細胞最具醫療價值的特性。幹細胞的珍貴價值，全在於其自我倍增及自我分化的特性。因此，CRYOLIFE 早於 2008 年起引入「細胞聚落形成單位 (CFU)」測試，檢驗不同儲存年份的樣本是否仍能保持自我倍增及自我分化能力，簡單而言即是測試經儲存的幹細胞在解凍後的活性。據國際品質鑑定機構 AABB 標準，血庫在發放幹細胞作任何醫療用途前，必須進行「細胞聚落形成單位 (CFU)」測試，以確保幹細胞品質，足以證明 CRYOLIFE 的定期質檢已到甚至超越國際水平。

CRYOLIFE 新一期的測試剛於 2020 年 11 月進行，但為預防新型冠狀病毒 Covid19 的擴散，實驗室人員需繼續嚴謹遵守最新的社交距離措施，以最低限度輪班工作。此次檢測從儲存缸中提取了一批樣本進行解凍及檢測，進行了「解凍後幹細胞恢復之存活能力」及「細胞聚落形成單位 (CFU)」測試。結果證明即使樣本被冷凍保存超過 17 年，大部分樣本的活性恢復率都超過 88%，遠高於 AABB 指引中規定移植前活性恢復率必需達到的 50%。此證明 CRYOLIFE 的長期保存系統並沒有影響臍帶血幹細胞的活性，質量測試結果令人鼓舞，促使我們的客戶大可放心，孩子們的臍帶血幹細胞在 CRYOLIFE 冷凍保存下仍然活躍，可用於未來的治療。

Comprehensive Quality Assurance Test

Committed to deliver the highest service quality and taking pride in its cutting edge facilities, CRYOLIFE undertakes comprehensive quality assurance test twice a year. At least one dummy sample from different storage tanks – of all prior preservation years – will be evaluated with test results published on website.

Conventional cord blood banks will conduct Recovery of Viability Test to evaluate the preservation of stored stem cell's viability. CRYOLIFE's quality control and quality assurance go beyond that. Apart from basic tests, CRYOLIFE also conducts advanced Colony Forming Unit (CFU) Test to investigate the ability of proliferation and differentiation of hematopoietic stem cells. In essence, this means the ability to thaw stored stem cells to ensure its activeness after long term cryopreservation. According to AABB, the industry's leading authority, this CFU test must be performed before the cord blood is being released for any medical treatment to ensure the quantity, quality and stability of thawed stem cells meet transplantation requirements. This highlights CRYOLIFE's achievement in international assessment standard on stored stem cells from umbilical cord blood.

Complying with the latest social distancing restrictions, the laboratory was operating with limited alternative manpower teams as precaution against COVID−19. A batch of dummy samples were selected in the latest QA Test in Nov 2020 as per schedule. These selected dummy samples were thawed to evaluate their respective viability and CFU. The result shows that the viability recoveries for all samples, even with a cryopreserved period of above 17 years, majorities are over 88%, which are way above AABB's guideline of 50% viability prior to transplantation. This indicates that long term storage in CRYOLIFE has no negative effects on the cord blood stem cell's viability and CFU. Overall the quality test result is encouraging and reassuring to our customers that their child's cryopreserved cord blood's stem cells with CRYOLIFE are still active and viable for future therapies.

臍血處理年份 (存放時間) Year of Storage (Storage Period)	解凍後幹細胞存活能力之恢復率 * Viability Recovery Rate*	細胞聚落形成單位 CFU ($x10^5$/ml)
2003 (17 年)	89.0%	1.22
2003 (17 年)	88.8%	3.54
2004 (16 年)	88.9%	5.25
2007 (13 年)	90.3%	4.27

* 國際醫療指標的移植存活能力要求 : >50%　International medical viability standard: >50%

\# 品質檢定測試結果是來自隨機抽樣方式來選取樣本，測試結果並不代表其他儲存中的樣本會有相同的結果。
QA Results shown are from randomly selected samples. It does not represent that other samples within the storage will bear the same result.

臍帶血收集及實驗室處理過程
Cord Blood Collection & LAB PROCESSING PROCEDURES

跨奧的承諾 24 小時內完成收取及處理
CRYOLIFE guarantees process completion within 24 hours

STEP 01

樣本收集盒 SAMPLE COLLECTION

婦產科醫生會使用我們提供，經過消毒及密封的樣本收集盒來收集臍帶血和臍帶。
Gynecologist uses our sterile and sealed collection kits to collect cord blood and cord tissue.

如何收集 How to collect

STEP 02

專車專人運送臍血 DEDICATED COURIER

在準父母通知後的 12 小時內，我們有專人到達醫院收取臍血，並妥善存放於保溫箱內，再直接由專車送往實驗室處理。
Within 12 hours upon notification from parents-to-be, our dedicated courier reaches the hospital to pick up the collection kits and place them in a cooler box to transfer them to the laboratory.

STEP 03

化驗臍血 CORD BLOOD TEST

我們會對母血及臍血樣本進行血型及傳染病測試作醫療記錄。
Blood samples from the mother and the cord blood are to be tested for blood group and possible viral infection as part of medical records. A small portion of the cord blood will be extracted for quality control.

樣本如何處理 How the sample is processed

STEP 04

低溫控速冷凍及永久儲存 PERMANENT CRYOPRESERVATION

將臍血中的幹細胞與其他成分分離到多間隔密閉式抗凍袋，並以電腦控速降溫儀將溫度降至 -90˚C，再將幹細胞的抗凍袋轉入低溫冷凍溫度的氣態氮儲存缸作永久保存。
Cord Blood is centrifuged to separate stem cells and other cells into a multi-chamber freezing bag, which is then cooled down gradually to −90°C with a computer-controlled freezer. The bag containing stem cell is further transferred into a vaporized liquid nitrogen freezer at cryogenic temperature for permanent cryopreservation.

焦點案例
NEWS CLIPS

https://apps.cuhk.edu.hk/vco/tc/20190208_regenerative_medicine_promises_and_challenges

段崇智校長以幹細胞重塑軟骨
Professor Rocky Tuan uses stem cells to recreate cartilage

香港中文大學校長段崇智教授為國際知名生物醫學科學家，專注肌肉骨骼生物學及組織再生研究。他的專研項目之一，為利用再生醫學技術幫助骨關節炎患者製作替補軟骨。關節炎是一種常見的風濕病，通常病發於老年人的膝蓋，會引起明顯疼痛。他首先從骨髓及胎盤等地方提取幹細胞，將其移植到仿生材料支架上，再放入孵化器中培植。此組織工程所製造出來的替補軟骨，已在動物身上試驗成功，而他亦有充分信心這種技術將在不久的將來可供患者使用。這展示了幹細胞在再生醫學中的巨大應用潛力，更證明了現時冷凍保存臍帶組織的重要性，因為這些含豐富幹細胞的組織將會是現代再生醫學的主要原材料。

Vice-Chancellor and President of The Chinese University of Hong Kong Professor Rocky Tuan is an internationally renowned biomedical scientist, specializing in musculoskeletal biology and tissue regeneration.

One of his foci is to create a replacement cartilage with biomimetic materials for osteoarthritis patients, a degenerative disease that afflicts pain on the knees of many elderly. He first extracts stem cells from places like bone marrow and placenta, grafts them on bio-absorbable materials, and cultures the mixture in incubators. He is excited by the positive results on animal studies and remains highly confident that such technology shall be available to patients soon.
This shows the enormous potential of stem cells for regenerative medicine. It is important not to expand or culture stem cells from umbilical specimen prior to cryopreservation as these are modern biological materials for different tissues or organs engineering in the near future.

https://parentsguidecordblood.org/en/news/results-duke-act-study-cord-blood-autism-highlights-parents

臍帶血治療自閉症成果顯著
Positive results in treating autism with cord blood

美國杜克大學最新的研究顯示，輸注臍帶血有效治療患有自閉症譜系障礙的兒童，是次研究對象為 4 至 7 歲，及非語言智商超過 70 的小孩。此研究建基於杜克大學早前以兒童自體臍血中的幹細胞進行靜脈輸液，以改善自閉症症狀的成功試驗，但此次後續研究證明，使用自體或異體臍帶血對其功效並沒有顯著差異。同時，另一項針對間充質幹細胞（MSC）對自閉症治療作用的新研究亦剛剛啟動。因此建議在冷凍保存之前，不要培植臍帶組織以提取幹細胞，因為 MSC 對於不同器官的細胞治療都非常有用。

Follow-up studies at Duke University, United States, showed significant benefit of cord blood infusion to treat children with autism spectrum disorder. The subjects were four to seven years of age and had non-verbal IQ over 70. It was designed after a successful initial study on improving symptoms of autism with intravenous infusion of stem cells from children's own cord blood. Interestingly, the latest study also showed no significant differences between the benefits of autologous or allogeneic cord blood. Another study has just begun to determine the effect of mesenchymal stem cells (MSC) found in umbilical cord tissue on autism treatment. Another important advice of not to culture umbilical cord tissue to extract stem cells prior to cryopreservation as MSC is very versatile for cells therapy of different organs.

https://www.azcentral.com/videos/news/local/arizona-health/2020/12/07/donated-cord-blood-saved-sophie-lees-life-but-most-parents-throw-away/3819247001/

臍帶血挽救小女孩生命
Cord blood donation saves young girl's life

五歲的時候，Sophie Lee 除了偶爾的腿痛，是個非常幸福的小女孩。然而，看似普通的成長痛卻是骨髓增生異常綜合症的一種症狀，此罕見的血液病為急性髓系白血病（一種惡性血癌）的先兆。Sophie 病情日漸惡化，但卻一直沒找到匹配的骨髓，慶幸最後找到了一個相配的臍帶血供體作移植。Sophie 現在已返回全日制學校，平日喜歡游泳和滑冰。她的媽媽促請準父母們在將臍帶血扔掉之前，多了解一下臍帶血的儲存和捐贈方法。她感歎：「這一個決定可能可救活很多人。」在危疾治療中，使用臍帶血幹細胞移植比骨髓移植或化療更容易匹配。希望政府更積極推廣儲存臍帶血的重要性，並鼓勵更多人捐贈，而不是將臍帶血視為醫療廢物。

At five, Sophie Lee was a perfectly happy girl except for sporadic leg pain. Yet the seemingly harmless growing pain turned out to be a symptom of Myelodysplastic Syndrome, a rare blood disorder and precursor to an aggressive form of blood cancer called Acute Myeloid Leukemia. While Sophie's condition deteriorated day by day, there was no bone marrow donor which could be matched. Luckily, an umbilical cord blood donor was found instead. Sophie is now back at school full time and enjoys swimming and ice skating. Her mom urges expectant parents to learn about cord blood storage and donation options before throwing it away as medical waste: "It could be life-saving for thousands of people out there."
Using stem cells from cord blood transplant is more forgiving than stem cells from bone marrow transplant or chemotherapy in treatment of critical illnesses. We wish our government can be more proactive in promoting the importance of cord blood storage and encouraging more donations from new births instead of letting umbilical samples being treated as medical waste.

https://parentsguidecordblood.org/en/news/cord-tissue-msc-helped-my-adolescent-son

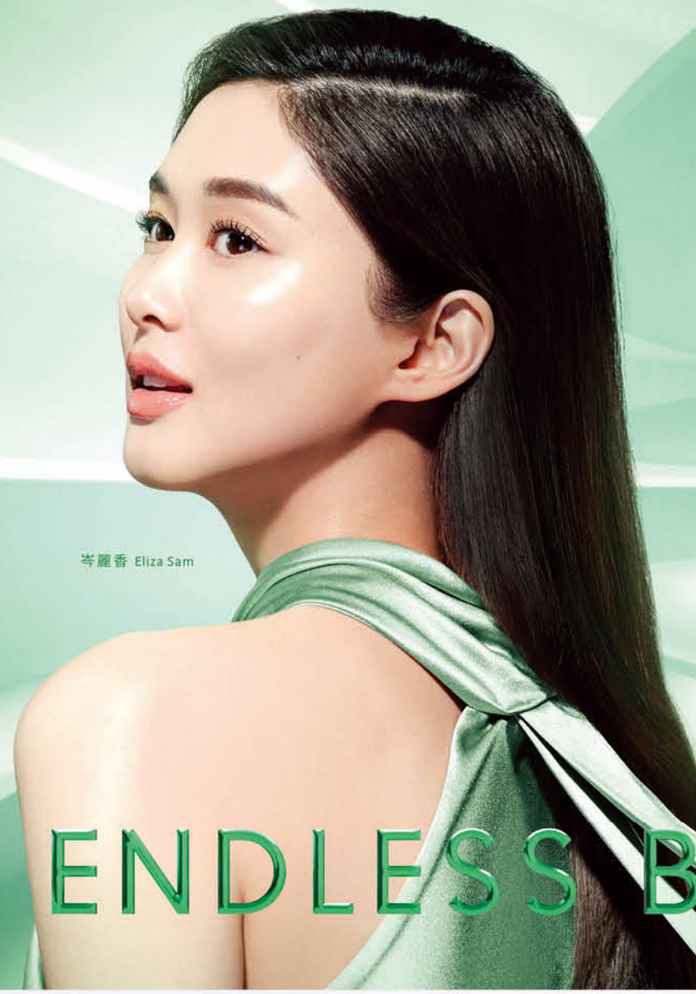
臍帶中間充質幹細胞改變了青年的一生
MSCs from cord tissue changes the life of a teenager

早產的 Colt 於妊娠 24 週就出生，患有腦性麻痺和自閉症譜系障礙，雖然可以自行完成一些簡單事情，但他對周遭環境極為敏感。在他 11 歲那年，父母帶他到巴拿馬，從臍帶組織提取間充質幹細胞進行靜脈注射。治程後，他的言語治療師判斷 Colt 表達和理解方面的語言能力都提高了 35%；而他亦不會輕易被突然的巨響嚇到；他甚至可以騎自行車而無需加上輔助輪子；最讓他父母感到恩慰的是他的自我意識和自信的增長。這是一個令人鼓舞的案例，顯示了幹細胞療法在治療青少年病患的潛力，及臍帶組織的間充質幹細胞的重要性。

Born at 24 week gestation, Colt suffered from cerebral palsy and autism spectrum disorder. Although he can still perform some simple tasks without assistance, he was extreme sensitivity to the environment. When Colt was 11, his parents took him to Panama for intravenous infusions of MSCs from umbilical cord tissue. After the treatment, his speech therapist reported a 35% improvement in both his expressive and receptive language, and he is less upset by sudden loud noises. He can even ride a bike without training wheels. What delighted his parents the most was his improved sense of self-awareness and self-confidence. It is an encouraging case that shows the potential of stem cell therapy on adolescents and the importance of mesenchymal stem cells from umbilical cord.

產後瞬間
重煥肌膚光彩

Rejuvenate Your Skin's Radiance After Birth



LIGHTMAC
Medical Skincare Centre

YOUR ENDLESS BEAUTY

懷孕時隨著雌激素和黃體激素分泌增加，荷爾蒙產生顯著變化，黑色素細胞激素導致表皮底層聚積大量黑色素，所以準媽媽的膚色會變得暗沉及不均。

With an increase of estrogen and progesterone secretion during pregnancy, a significant change in hormones, especially melanocyte hormones, lead to a large amount of melanin produced in the bottom layer of the skin epidermis. This is the reason why you might have a darker and uneven skin tone during pregnancy.

一般而言產後荷爾蒙回復正常，色素會逐漸轉淡，但褪卻速度會因年齡、體質及健康狀況等而有所不同，在某些情況下，更可能會久久不退。

為了以最短時間，解決色素沉著和膚色不均問題，Lightmac 以國際安全認證的先進高階儀器，為產後媽媽度身訂制專屬護膚方案。Lightmac 的專業服務深得客戶認可，可以透過不同的皮膚護理療程，幫助產後媽媽蛻變得更美更自信，狀態更勝從前！

Generally, after the birth, when the hormones return to normal, the pigments will fade gradually. Yet the speed of hormones normalization and pigment fading vary with age, physical fitness and wellness of your body during the postpartum period. In some cases, pigments may not totally fade.

For fast and effective eradication of pigmentation and uneven skin tone issues after birth, Lightmac offers tailor-made skin treatment program for individuals, supported by advanced and accredited laser equipment. Feedbacks on Lightmac's services and professionalism have been positive as they have different value added programs for post-natal mothers to rejuvenate their body and beauty.

CRYOLIFE
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Since 1996

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工作坊

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教室

孕照
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