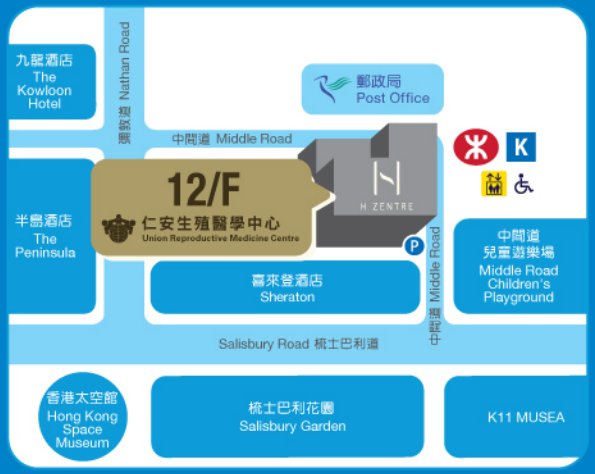
誰需要特別精液診斷測試？
Who needs special sperm diagnostic testing?

- 多次宮腔內人工授精失敗
  Repeated intrauterine insemination (IUI) failures
- 多次試管受精失敗
  Repeated in vitro fertilization (IVF) failures
- 不明原因性不孕
  Unexplained infertility
- 超過40歲的男士精液單個參數異常。例如：嚴重畸形（正常形態<1%）或弱精症（前向運動<20%）或精液中大量圓形細胞 >5%。
  Men over 40 years old with single abnormal semen parameter. For example: severe teratozoospermia (normal form <1%) or asthenozoospermia (forward motility <20%) or high number of round cells >5%.
- 男士泌尿、生殖系統重複感染
  Men with recurrent urinary / genital infections
- 慣性流產
  History of recurrent miscarriages

仁安生殖醫學中心
Union Reproductive Medicine Centre

九龍尖沙咀中間道15號 H Zentre 12 樓
12/F, H Zentre, 15 Middle Road, TST, KLN.

電話 Tel: 3126 1623
電郵 E-mail: urmc@union.org



港鐵 MTR

港鐵尖東站 K 出口，步行約1分鐘
East TST MTR Station (Exit K), approx. 1-minute walk

港鐵尖沙咀站 E 出口，步行約3分鐘
TST MTR Station (Exit E), approx. 3-minute walk

CCM/RMC/HZ-SSDT-202105

仁安醫院
UNION HOSPITAL

仁安生殖醫學中心
Union Reproductive Medicine Centre

精液診斷測試
Special Sperm Diagnostic Testing

仁心、安心、貼您心
Caring • Reliable • Empathetic

精子脫氧核糖核酸碎片含量測試
Sperm DNA Fragmentation Assay

- 精子的細胞核和脫氧核糖核酸的完整性是與卵子受精和胚胎的發育相關的。
  The sperm nucleus and DNA integrity are correlated with fertilization, development of embryos and pregnancy rates.[1]
- 此測試能夠分辨出具有完整脫氧核糖核酸的精子及有脫氧核糖核酸殘碎的精子。
  This assay is able to differentiate between sperms with DNA fragmentation and intact DNA.
- 精子脫氧核糖核酸碎片指數（SDF）能夠預測宮腔內人工授精妊娠結果。當SDF值大過30%時，成功懷孕至生育的機會會從19.0%顯著降至到1.5%。SDF值大過30%的夫婦應直接接受試管嬰兒治療程序。利用體外受精或胞漿內單精子注射，可顯著提高懷孕機會。
  The sperm DNA fragmentation (SDF) associates with pregnancy outcome in intrauterine insemination (IUI). When SDF is greater than 30%, the chance of live birth is significantly decreased from 19.0% to 1.5%. When SDF level is greater than 30%, couples should be advised to undergo in vitro fertilization (IVF) or intracytoplasmic sperm injection (ICSI) to maximize the pregnancy outcome.[2]

精子透明質酸結合分析
Sperm Hyaluronan Binding Assay

- 透明質酸是包圍在卵母細胞周圍的卵丘細胞的主要成分，在自然受精過程中，它作為一個化學因子吸引精子，並誘發精子的超活化。
- 只有成熟的精子才能夠結合到透明質酸和卵子透明帶，精子與透明質酸結合的數量是一個指標，可以確定精子的成熟和生理功能。
- 透明質酸結合分析是一個獨特的方法，對於懷疑不育的男士可以用此方法預測精子對卵子的受精能力。

- Hyaluronic Acid is a major component of the cumulus cells surrounding the oocytes, it serves as a chemo-attractant for sperms and induces sperm hyper-activation.[3,4,5,6,7]
- Only the mature sperms are able to bind to hyaluronic acid and zona pellucida. The percentage of sperm binding to Hyaluronic Acid is an indicator to determine the maturity and physiological function of the sperms.[3,4,5,6,7]
- The Hyaluronic Binding Assay is a unique tool for suspected male infertility and in assessing the ability of spermatozoa to fertilize human oocytes.[3,4,5,6,7]

1. Ahmadi, A and Ng SC. 1999. Developmental capacity of damaged spermatozoa. Human Reprod. 14:2279-2285.
2. Bungum M, Humaldan P, Axmon A., et al. 2007. Sperm DNA integrity assessment in prediction of assisted reproduction technology outcome. Human Reproduction. 22(1): 174-179.
3. Breznik Pregl B, Kovacic B, Vlaisavljevic V. 2013. Are sperm DNA fragmentation, hyperactivation, and hyaluronan binding ability predictive for fertilization and embryo development in in vitro fertilization and intracytoplasmic sperm injection? Fertil Steril. 99(5):1233-41.
4. Huszar G. 2012. Sperm testing and ICSI selection by hyaluronic acid binding: the hyaluronic acid coated glass slide and petri dish in the andrology and IVF laboratories. Practical manual of in vitro fertilization: advanced methods and novel devices. New York: Springer. 241-257.
5. Worilow K.C, Eid S, Woodhouse D., et al. (2013). Use of hyaluron in selection of sperm for ICSI; a significant improvement in clinical outcomes-multicentre, double-blind randomised trial. Hum Reprod; 28(2): 306–314
6. Yagci Artay, Murk William, Stronk Jill., et al. 2010. Spermatozoa bound to solid state hyaluronic acid show chromatin structure with high DNA chain integrity: an acridine orange fluorescence study. Journal of Andrology. 31(6):566-572.
7. Origio. (2013). HBA Slide: Sperm diagnostics based on Hyaluronic acid binding. Retrieved from http://www.origio.com/~/media/Origio/Files/PDS/MAD/HBA-v3-June18-2013.ashx