
Fertility and Andrology

Five Things Clinicians and Patients Should Question

by
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1 **Don't routinely perform preimplantation genetic testing for aneuploidy screening on patients undergoing IVF.**

Preimplantation genetic testing for aneuploidy (PGT-A) was developed to help select the best embryos for transfer in an in vitro fertilization (IVF) cycle by screening out aneuploidy. However, there is no improvement in live birth rate per cycle started compared with IVF alone. PGT-A adds extra cost, carries a risk of misdiagnosis, and there is no long-term data reported on childhood outcomes. Patients should be counselled on the risks and limitations of testing.

2 **Don't prescribe gonadotropins in doses of >450 units daily for controlled ovarian stimulation in IVF.**

Several studies demonstrate that the use of high doses of gonadotropins does not result in an increased number of dominant follicles recruited, mature oocytes retrieved, nor good quality embryos produced compared with lower dosing regimens. Given that there is a greater cost to the patient, with no evidence of an improved outcome, avoidance of high doses of gonadotropins is recommended.

3 **Don't routinely perform assisted hatching on fresh embryos prior to transfer.**

Assisted hatching (AH) is a technique where the zona pellucida is disrupted to improve implantation and therefore live birth rates from embryos created through IVF. Although there may be a benefit to performing AH in certain patient populations, the routine use of AH for all patients undergoing a fresh embryo transfer has not been shown to improve live birth rates.

4 **Don't prescribe lymphocyte immunization therapy.**

There is no improvement in live birth rate or clinical pregnancy rate with lymphocyte immunization therapy and it has potential for harm.

5 **Don't routinely perform sperm DNA fragmentation testing.**

High-grade evidence to support the routine use of sperm DNA fragmentation testing as part of initial screening investigations for infertility is lacking.

How the list was created

The Canadian Fertility and Andrology Society (CFAS) Choosing Wisely National Working Group used a modified Delphi consensus approach, consisting of 5 rounds, to generate item ideas, review supporting evidence, assess clinical relevance, estimate recommendation impact and narrow the items. The Working Group was comprised of 11 diverse clinicians with experience in the field. Round 4 of the Delphi process consisted of a National CFAS Membership Survey to rank the remaining 13 items. The top 5 items were selected based on 4 qualities: prevalence, cost, potential for harm and impact on clinical practice (round 5). The CFAS Board of Directors provided feedback which was incorporated into the composition of the final list approved by the Board. Annual review of the literature and revision of the list is performed by the CFAS Clinical Practice Guideline Committee.

Sources

- 1 Chan C, et al. Preimplantation genetic testing for aneuploidy: A Canadian Fertility and Andrology Society Guideline. Reproductive Biomedicine Online. 2021; 42(1): 105-116. [PMID: 33303366](#).
Munne S, et al. Preimplantation genetic testing for aneuploidy versus morphology as selection criteria for single frozen-thawed embryo transfer in good prognosis patients: a multicenter randomized clinical trial. Fertility and Sterility 2019; 112: 1071–1079. [PMID: 31551155](#).
Yan, et al. Live Birth with or without Preimplantation Genetic Testing for Aneuploidy. N Engl J Med 2021;385:2047-58. [PMID: 34818479](#).
- 2 Friedler S, et al. An upper limit of gonadotropin dose in patients undergoing ART should be advocated. Gynecol Endocrinol 2016 Dec;32(12):965-969. [PMID: 27345589](#).
Haas J, et al. Do poor-responder patients benefit from increasing the daily gonadotropin dose during controlled ovarian hyperstimulation for IVF? Gynecol Endocrinol 2015 Jan;31(1):79-82. [PMID: 25223892](#).
Lensen, et al. Individualised gonadotropin dose selection using markers of ovarian reserve for women undergoing in vitro fertilisation plus intracytoplasmic sperm injection (IVF/ICSI). Cochrane Database of Systematic Reviews 2018, Issue 2. Art. No.: CD012693. [PMID: 29388198](#).
- 3 Lacey, et al. Assisted hatching on assisted conception (in vitro fertilisation (IVF) and intracytoplasmic sperm injection (ICSI)). Cochrane Database of Systematic Reviews 2021, Issue 3. Art. No.: CD001894. [PMID: 33730422](#).
American Society for Reproductive Medicine. The role of assisted hatching in in vitro fertilization: a guideline. Fertil Steril. 2022 Jun;117(6):1177-1182. [PMID: 35618358](#).
- 4 Achilli C, et al. The role of immunotherapy in in vitro fertilization and recurrent pregnancy loss: a systematic review and meta-analysis. Fertil Steril 2018; 110(6):1089-1100. [PMID: 30396553](#).
Ober C, et al. Mononuclear-cell immunisation in prevention of recurrent miscarriages: a randomised trial. Lancet 1999; 354: 365–69. [PMID: 10437864](#).
- 5 Pfeifer S, et al. The clinical utility of sperm DNA integrity testing: a guideline. Fertil Steril. 2013;99(3):673–7. [PMID:23391408](#).
Schlegel PN, et al. Diagnosis and treatment of infertility in men: AUA/ASRM guideline part I. Fertil Steril. 2021 Jan;115(1):54-61. doi: 10.1016/j.fertnstert.2020.11.015. Epub 2020 Dec 9. [PMID: 33309062](#).
Zhang Z, et al. Sperm DNA fragmentation index and pregnancy outcome after IVF or ICSI: a meta-analysis. J Assist Reprod Genet. 2015;32:17–26. [PMID: 25392073](#).

About the Canadian Fertility and Andrology Society

The Canadian Fertility and Andrology Society (CFAS) is a multidisciplinary national non-profit society that serves as the voice of reproductive specialists, scientists, and allied health professionals working in the field of Assisted Reproduction in Canada. The mission of the CFAS is to responsibly advance reproductive science and medicine in Canada through leadership, research and guidance.



About Choosing Wisely Canada

Choosing Wisely Canada is the national voice for reducing unnecessary tests and treatments in health care. One of its important functions is to help clinicians and patients engage in conversations that lead to smart and effective care choices.