

Fertility and Andrology

Five Things Clinicians and Patients Should Question

by
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Last updated: December 2019



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 clear improvement in cumulative live birth rate compared with IVF alone. PGT-A is expensive, carries a risk of misdiagnosis, and there is no long-term data reported on childhood outcomes. PGT-A should not be performed routinely without an indication and 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 (approximately 450 units daily or greater) does not result in an increased number of dominant follicles recruited, mature oocytes retrieved, nor good quality embryos produced compared with lower dosing regimens. Furthermore, higher doses of gonadotropins have been associated with an increased risk of ovarian hyperstimulation syndrome (OHSS). Given that there is a greater cost to the patient and potential for harm, with no evidence of an improved outcome, avoidance of high doses of gonadotropins is recommended.

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

Laser assisted hatching (LAH) 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 LAH on fresh embryos in certain patient populations, the routine use of LAH for all patients undergoing a fresh embryo transfer has not been shown to improve live birth rates.

4 **Don't prescribe corticosteroids, IVIG, leukemia inhibitory factor or lymphocyte immunization therapy for patients undergoing IVF, those with a history of recurrent implantation failure or patients with recurrent pregnancy loss.**

Multiple studies have demonstrated no improvement in live birth rate or clinical pregnancy rate with steroids, granulocyte colony-stimulating factor (G-CSF), leukemia inhibitory factor (LIF) or immunoglobulin (IVIG) in those undergoing IVF or those with a history of recurrent implantation failure (RIF). In women with a history of recurrent pregnancy loss (RPL), there is evidence demonstrating no improvement in live birth rate with IVIG or lymphocyte immune therapy.

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. Sperm DNA fragmentation tests are poor at predicting outcomes in patients undergoing assisted reproductive technologies, particularly for patients undergoing IVF or intracytoplasmic sperm injection (ICSI), and should not be used to guide treatment decision-making.

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.

Sources

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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.

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