


Artificial cycle for frozen embryo transfer is associated with increase miscarriage rate compared to natural or stimulated cycles

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No Consensus on the optimal endometrial protocol for FET cycles

- Artificial cycle (AC) +/- GnRH agonist
 - Natural cycle (NC) / Natural modified cycle (mNC)
 - Stimulated cycle (SC)
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Objective

- To evaluate the pregnancy loss rate in a large cohort between the three endometrial preparation methods (NC/SC/AC).
- Number of patients needed to see a 5% difference in pregnancy loss on the basis of a 25% pregnancy rate equals 13 000 frozen embryo transfers.

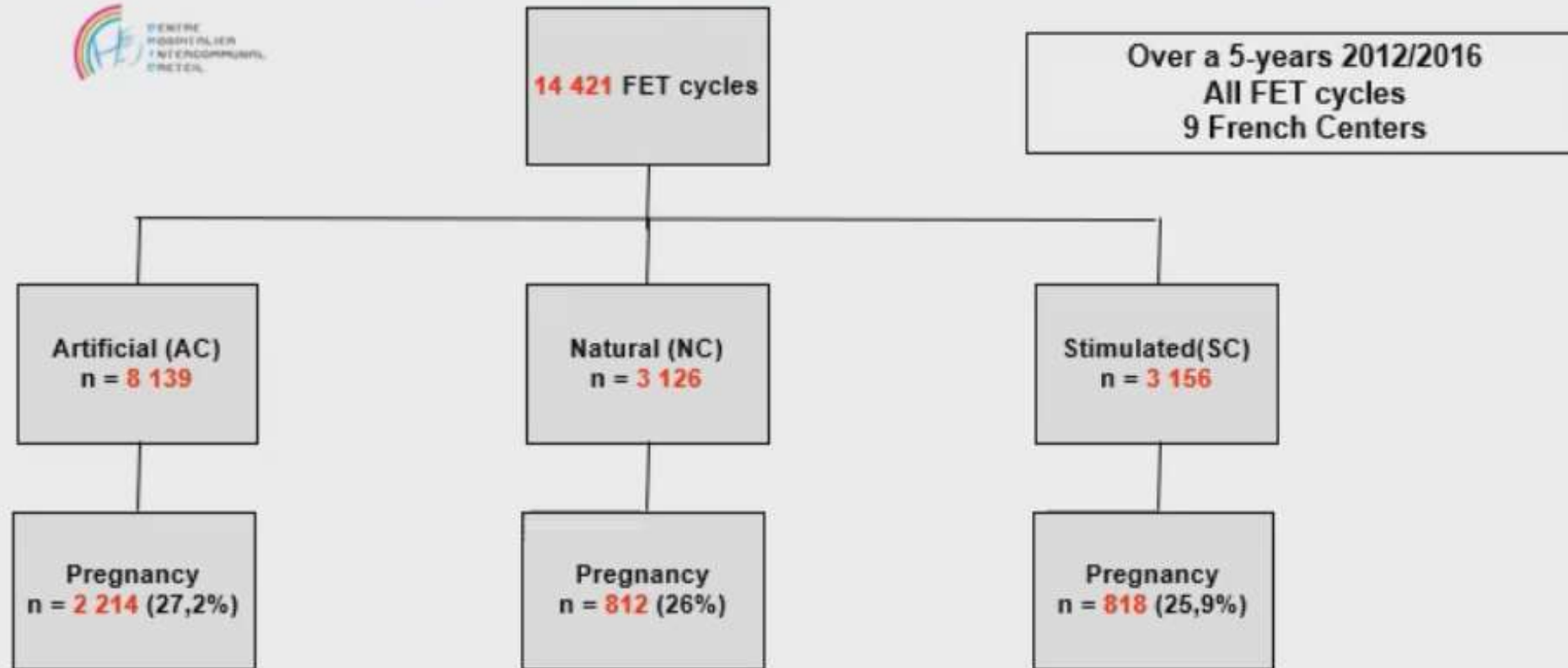
Inclusion criteria

- 18 - 43 years-old
- All embryo's development stage
- IVF/ICSI from FET

Exclusion criteria

- Gamete donation
- Surgical sperm
- PGS

Pregnancy Loss => any pregnancy arrest from HCG > 100 UI - 12 GW



Pregnancy Rate – 26,7%

Pregnancy loss rate – 31,5%

Live birth rate – 17,8%

Results

	Artificial cycle	Natural cycle	Stimulated cycle	p
FET cycles, n	8139	3126	3156	
Pregnancy rate >100 UI	27,2% (2214)	26% (812)	25,9% (818)	0.2
Pregnancy Loss rate	36.5% (808)	25.7% (209)	23.6% (193)	<0.005
Live Birth rate	16.9% (1375)	18.8% (588)	19.3% (608)	<0.003


After adjustment *

Artificial cycle vs Natural cycle OR 1.66 (1.38 - 1.98)

Artificial cycle vs Stimulated cycle OR 1.84 (1.5 - 2.22)

*Adjusted on centers, women age, BMI, history of miscarriage, ovulation disorder, tabaco, history of delivery, endometriose, uterine disease, long term cryopreservation, and embryo's development stage

Conclusion

- Analysis of **14 421 FET** cycles and **3 844 pregnancies**
 - Artificial cycle was significantly associated with an **increase of more than 50 % of Pregnancy loss**
 - No difference between Natural cycle and Stimulated cycle
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Discussion

- Artificial cycle is **the most used** protocol in Europe and Worldwide
 - **Advantages**
 - Flexibility and lab activity programming
 - Reduce cost
 - Less monitoring
 - **Disadvantages**
 - Higher pregnancy loss / Lower live birth rate, needed to be confirmed on prospective study
 - Lack of the standardized protocol
 - Compliance and absorption of the vaginal treatment
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