ANALYSIS OF FROZEN EMBRYO TRANSFER (FET) OUTCOMES IN PATIENTS WITH HISTORY OF BILATERAL SALPINGO-OOPHORECTOMY (BSO)

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BACKGROUND

- Younger women with genetic predispositions to ovarian cancer are pursuing fertility preservation in preparation for risk-reducing oophorectomy.
- While post-menopausal women with essentially hormonally inactive ovaries can achieve pregnancy via IVF, data exploring FET outcomes in patients with surgically absent ovaries is lacking[1].
- More data on ART outcomes is needed to counsel patients on reproductive outcomes following ovarian tissue removal for cancer prophylaxis or active disease[2].

OBJECTIVE

To compare FET outcomes between individuals with surgically absent bilateral ovaries and controls with bilateral ovaries in situ.

MATERIALS & METHODS

- **Design:** Retrospective cohort study
- **Setting:** Single, urban, academic fertility center
- **Inclusion Criteria:** All patients with bilateral absent ovaries who underwent autologous FET or donor embryo transfer between 1/2013-12/2023, age-matched to controls in a 2:1 fashion
- **Exclusion criteria:** Absence of ovaries due to a congenital anomaly
- **Primary outcome:** Live birth rate
- **Secondary outcomes:** Other FET outcomes, including miscarriage and ectopic
- **Statistical analysis:** Mann-Whitney U, Fisher's Exact, and Pearson Chi-Square were used where appropriate with an alpha error of 0.05 as significant

TABLE 1: MEDIAN BASELINE MEASURES OF STUDY GROUP

	n	Age at cycle start (years)	Age at freeze (years)	Day 2 E2 (pg/mL)	EE >7mm (%)
BSO	25	36	33.0	29.0	4.0
Control	50	36	34.5	36.5	21.1
			p = 0.95	p = 0.34	p = 0.08

FIGURE 1: BILATERAL SALPINGOOOPHERECTOMY INDICATION

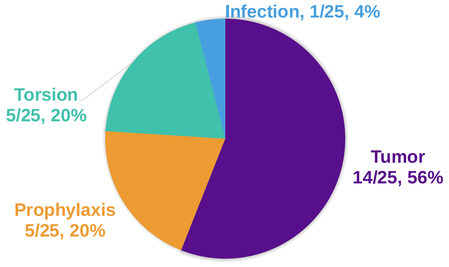
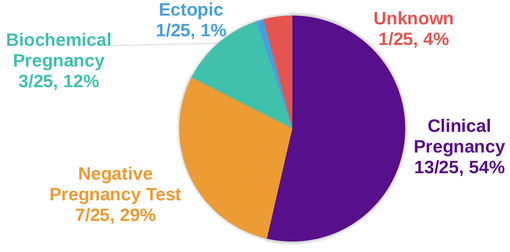


FIGURE 2: FET OUTCOMES OF FET IN BSO PATIENTS



13 Pregnancies | **12 Live Births** | **1 Miscarriage**

RESULTS

- A total of 25 FETs in patients with BSO were reviewed and compared to 50 controls with ovaries in situ.
- **Table 1:** Age at cycle start, age at egg freezing, day 2 estradiol level, and day 2 endometrial lining were all similar between groups.
- Indications for BSO are noted in **Figure 1**, with the most common reason for BSO being active tumor, followed by prophylaxis and torsion, then infection.
- Of BSO patients with a clinical pregnancy, 12/13 patients had confirmed live birth (92.31%) and 1/13 had a first trimester spontaneous abortion (7.69%), similar to the control group outcomes (p=0.19).
- FET treatment outcomes are noted in **Figure 2,** with most common outcome being clinical pregnancy, following by negative pregnancy test, biochemical pregnancy, ectopic pregnancy (cornual), and unknown outcome.
  - There was no difference in FET outcomes in BSO vs control group (p=0.32).

CONCLUSIONS

- Patients undergoing FET with bilaterally absent ovaries had **similar clinical pregnancy and live birth rates** compared to aged-matched controls with both ovaries in situ.
- This is a crucial counseling point that can be utilized by the multidisciplinary care teams to facilitate shared decision making for patients with predispositions to cancer.
- Additional research is needed to further explore obstetrical outcomes and risks in this population.

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CONTACT INFORMATION

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