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**UNDERSTANDING PEDIATRIC FERTILITY PRESERVATION IN THE UNITED STATES**

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**OBJECTIVE:**

The American Society for Reproductive Medicine and American Academy of Pediatrics advocate for fertility preservation (FP) counseling and referrals for patients with fertility-threatening conditions or who require gonadotoxic therapy. Inability to achieve biological parenthood may cause psychological stress later in life. FP increases potential to eventually conceive biologically related children. Few studies have evaluated characteristics of pediatric patients who pursue FP. This study assessed FP consultation trends among pediatric patients over a 20-year period.

**MATERIALS AND METHODS:**

This retrospective chart review included 246 patients aged  $\leq 18$  years old who underwent FP consultation across 87 United States fertility clinics from 2004 to 2023, excluding cases unrelated to FP. Primary outcome was FP indication. Secondary outcomes were patient demographics and type of FP procedure(s) undergone.

**RESULTS:**

Pediatric patients sought FP consultation primarily following cancer diagnosis (50.4%, n=124) (Table 1). 13.4% (n=33) were transgender patients seeking to initiate gender-affirming care. 11.8% (n=29) were seen for a difference of sexual development. Half of patients (50.4%, n=124) were 17-18 years old, 32.1% (n=79) were 15-16 years old, and the remaining 17.5% (n=43) were 11-14 years old. Race/ethnicity was unknown for 56.5% (n=139) patients; 29.3% (n=72) identified as White and 6.5% (n=16) as Black. Less than 3% identified as Hispanic/Latino, Asian,



or biracial/multicultural, respectively. Most patients were female at birth (78.5%, n=193), 77 of whom underwent oocyte cryopreservation (40%) with a median of one cycle. 37.7% (n=20) of the 53 patients who were male at birth underwent sperm cryopreservation.

**Table 1: Indications for FP Consultation and Cycles Completed**

<b>FP Indication, n (%)</b>	
Cancer	124 (50.4)
Gender-affirming care	33 (13.4)
Difference of sexual development (e.g., Turner Syndrome)	29 (11.8)
Benign gynecologic condition requiring surgery (e.g., ovarian cyst)	19 (7.7)
Primary ovarian insufficiency	16 (6.5)
Non-cancerous hematologic disorder (e.g., sickle cell disease)	11 (4.5)
Other (e.g., autoimmune/genetic disease)	14 (5.7)
<b>FP Procedure, n (%)</b>	
Oocyte cryopreservation	77 (31.3)
Sperm cryopreservation	20 (8.1)
In vitro fertilization	5 (2)
None	144 (58.5)

**CONCLUSIONS:**

Pediatric patients seen for FP consultation were primarily older teenagers, female at birth and cancer patients. Less than half of both male and female patients proceeded with FP procedures. Nevertheless, FP counseling is critical. Future research should elucidate patient reasons for foregoing FP procedures.

**IMPACT STATEMENT:**

Efforts should be made to increase FP access for all eligible pediatric patients by educating both patients and referring providers.



## REFERENCES:

1. Johnson EK, Finlayson C, Rowell EE, Gosiengfiao Y, Pavone ME, Lockart B, Orwig KE, Brannigan RE, Woodruff TK. Fertility preservation for pediatric patients: current state and future possibilities. *Journal of Urology*. 2017 Jul 1;198(1):186-94.