

# MP44-06 - Emergency surgical sperm & spermatogonial stem cell retrieval in oncological context

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**Introduction:** Fertility preservation (FP) must be considered in all patients undergoing high risk treatment for oncological/hematological disease. In men, semen cryopreservation is straightforward; however, if men are found to be azoo-/cryptozoospermic or unable to masturbate/ejaculate, choices have been historically limited.

**Objective:** To demonstrate that FP of oncological patients for whom sperm cryopreservation from semen is impossible is successful with emergency surgical sperm / spermatogonial stem cell retrieval (ES<sup>4</sup>CR).

**Methods:** Single center retrospective study from Dec 2017 to Oct 2019 in a tertiary referral center (UCLH). Data analyzed with MsExcel 2016.

**Results:** Thirty-seven patients chose to go forward with ES<sup>4</sup>CR. Patients' primary diagnoses and characteristics are described in Figure 1 and Table 1 respectively. ES<sup>4</sup>CR outcomes & types are depicted in Table 2 and Figure 2. The overall success rate was 78.4% considering a theoretical 100% success rate for spermatogonial stem cell retrieval.

Figure 1: Primary diagnosis of patients requiring ES<sup>4</sup>CR.

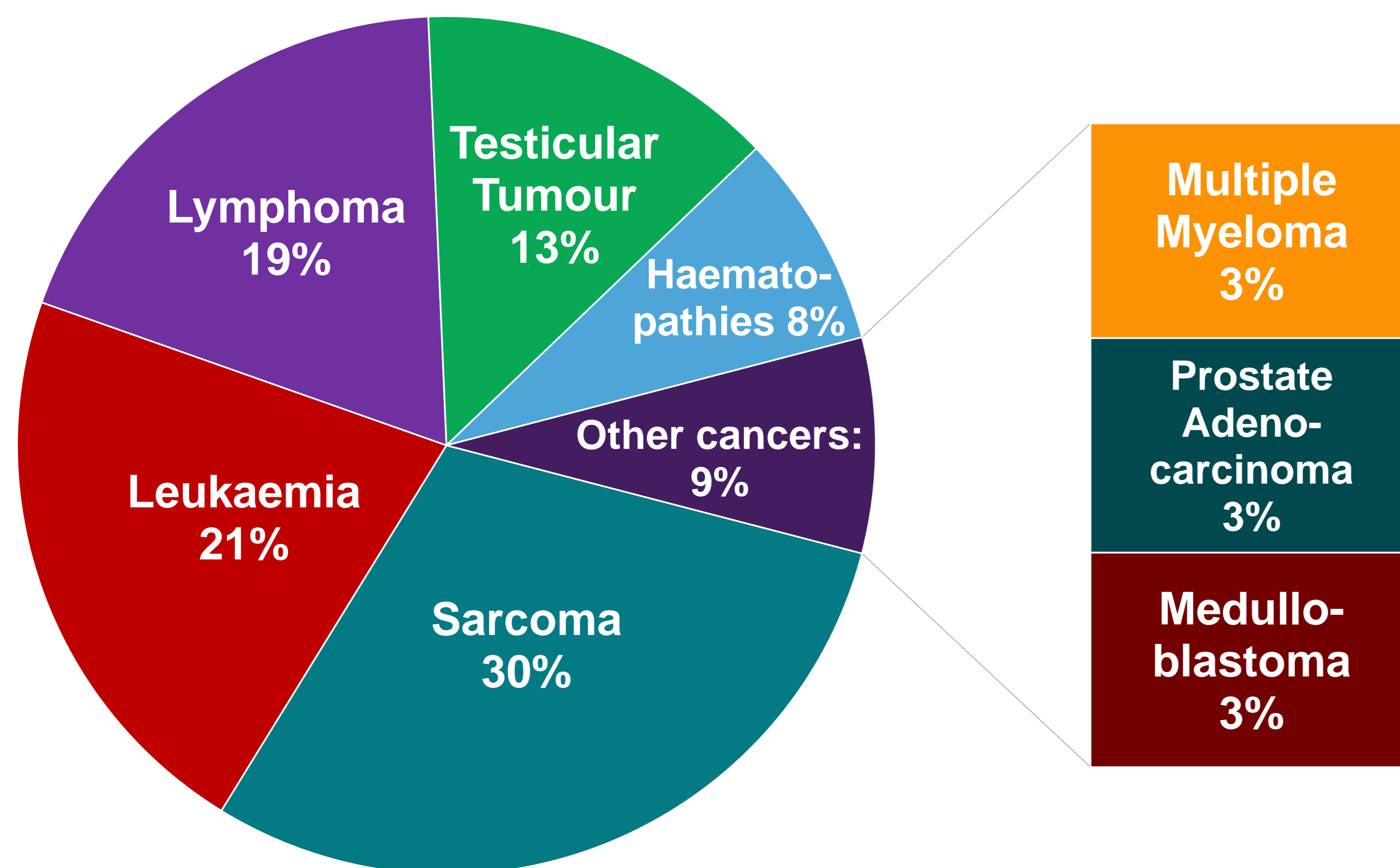
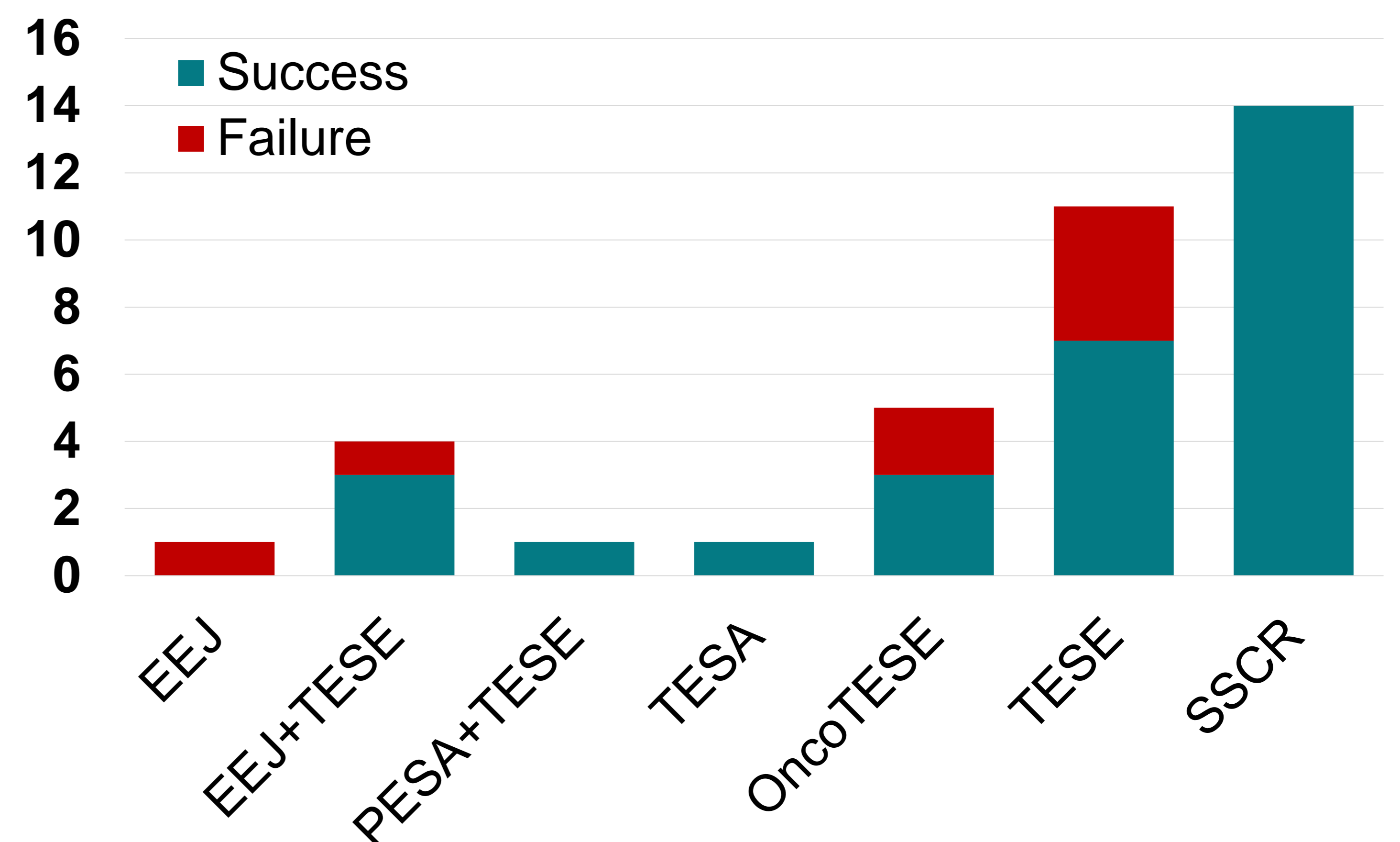


Figure 2: ES<sup>4</sup>CR outcome by intervention type (n=37).



EEJ = electroejaculation, TESA = testicular sperm aspiration, TESE = testicular sperm extraction, SSCR = spermatogonial stem cell retrieval

Table 1: Patients' characteristics before ES<sup>4</sup>CR.

Patient characteristics	Average	SD
Age (years)	18.6	9.7
Serum testosterone (ng/dL)	174.2	188.7
Serum FSH (UI/l)	6.4	8.1
Serum LH (UI/l)	6.9	7.2

SD = standard deviation.

Table 2: Outcome at ES<sup>4</sup>CR.

Patient outcomes	Median	IQR
Days from semen analysis	5.0	2.0 – 11.4
Days to chemotherapy	1.0	1.0 – 3.8
Sperm vials & straws stored	6.0	0.0 – 9.0
Johnsen score	5.9	2.5 – 7.1

IQR = interquartile range.

## Conclusion:

Emergency surgical sperm / spermatogonial stem cell retrieval (ES<sup>4</sup>CR) in oncological context is a valid FP option with high success rate for patients in which sperm cryopreservation from semen is impossible. By providing an effective pathway, FP is possible with minimal delay to oncological treatment. Therefore, Oncologists should involve Urologists to improve men's late effects on fertility from cancer treatment.

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