



FERTILITY, REPRODUCTIVE ENDOCRINE, AND SEXUAL HEALTH CONSIDERATIONS

- Addressing fertility and sexual health and function should be an essential part of the care of AYAs with cancer who are at any level of risk for impaired fertility or sexual dysfunction due to cancer treatments, regardless of gender identity, sexual orientation, or financial status.^h
- Perform an assessment of the risk for gonadotoxicity and impaired fertility due to cancer and its treatment and discuss that assessment and options for fertility preservation with the patient. Do this as soon as possible prior to the start of therapy and throughout the course of treatment.ⁱ
- Assess for routine reproductive/gynecologic health care when transitioning from pediatric to adult care.



- Initiate referral for reproductive health specialist and/or provide resources for off-site/remote sperm banking as soon as possible for all patients who are interested in pursuing fertility preservation.
- Consider the emotional impact of conversations surrounding fertility preservation, especially for the younger AYA and sexual gender minority (SGM) patient.
 - ▶ [See Comprehensive Psychosocial/Behavioral Considerations](#)
 - ◇ [Individual \(AYAO-7 and AYAO-8\)](#)
 - ◇ [Relationships \(AYAO-9\)](#)
 - ◇ [Socioeconomic Issues \(AYAO-11\)](#)
- Assist AYA patients in identifying financial resources for fertility preservation.



[Fertility, Reproductive Endocrine, and Sexual Health Considerations \(AYAO-6\)](#)

^h Meacham LR, et al. J Adolesc Young Adult Oncol 2020;9:662-666; Mulder RL, et al. Lancet Oncol 2021;22:e68-e80; Mulder RL, et al. Lancet Oncol 2021;22:e57-e67; Mulder R, et al. Lancet Oncol 2021;22:e45-e56.

ⁱ Green DM, et al. Pediatr Blood Cancer 2014;61:53-67.

Note: All recommendations are category 2A unless otherwise indicated.



FERTILITY, REPRODUCTIVE ENDOCRINE, AND SEXUAL HEALTH CONSIDERATIONS

General^l

- After assessing the patient's risk for impaired fertility, and the patient's preferences for fertility preservation, recommend a form of appropriate fertility preservation and/or make a referral to a fertility preservation specialist or sperm bank.^k
- Discuss effects of treatment on sexual function during and after treatment. Consider referral to a specialist as appropriate. See [NCCN Guidelines for Survivorship](#).
- Discuss contraception before, during, and after treatment.
 - ▶ Consult with OB/GYN for patients with ovaries/uterus and consult the [CDC Summary Chart of U.S. Medical Eligibility Criteria](#) to assist with the safety and efficacy of selection of appropriate contraception for individuals at risk of pregnancy.

Individuals with Testes

- Sperm banking is the preferred choice for patients without erection or ejaculation issues. For patients who can delay cancer treatment, consider more than one collection of ejaculate prior to initiating treatment.
 - ▶ Suggest a local sperm bank or available online sperm banking kit.^l
 - ▶ A semen analysis should be performed by the sperm bank, which should be assessed to ensure viable sperm has been frozen before starting cancer treatment, if time allows.
- For patients with erection or ejaculation issues, there are other options available,^m including:
 - ▶ PDE5 inhibitors
 - ▶ Vibratory stimulation
 - ▶ Electro-ejaculation
 - ▶ Collection of retrograde ejaculate
- Testicular transposition out of the field of radiation can be considered for patients in whom the radiation field will include the testes.
- For those who cannot ejaculate, or who now have azoospermia or insufficient sperm in the ejaculate to freeze, discuss surgical sperm extraction as an alternative strategy, such as the testicular sperm extraction (TESE) procedure.^m
- Discuss effects of treatment on gonadal hormone function. After completion of treatment, screen or refer the patient to a specialist as appropriate.ⁿ

Individuals with Ovaries

- For patients who can delay cancer treatment for approximately 3 weeks, discuss oocyte or embryo cryopreservation via immediate (or random start) controlled ovarian stimulation (COS).
- For patients who cannot delay treatment for oocyte or embryo cryopreservation and are at high risk for impaired fertility, discuss or refer the patient for consideration of ovarian tissue cryopreservation.
- For patients in whom the radiation field will include the ovaries, discuss oophorectomy or transposition of the ovaries out of the field of radiation.
- Discuss effects of treatment on gonadal hormone function during and after treatment. Some individuals face primary ovarian insufficiency and should be screened and treated by a specialist. Additionally, for individuals who did not undergo fertility preservation prior to treatment, some may still be eligible for fertility preservation after treatment is completed. After completion of treatment, screen or refer the patient to a specialist as appropriate.^o
- Menstrual suppression
 - ▶ Progestin-only methods, combined hormonal contraceptives, or gonadotropin-releasing hormone (GnRH) agonists may be used in protocols that are predicted to cause prolonged thrombocytopenia and present a risk for menorrhagia. It is controversial whether menstrual suppression provides adequate protection for the ovaries. GnRH agonists may protect ovarian function^p; however, other fertility preservation modalities should still be considered and, if possible, pursued.

^l Creating safe spaces to discuss gender identity and sexual orientation can mitigate challenges and foster community partnerships with/provide community resources for fertility and psychosocial experts in sexual and gender minorities (GLMA directory): https://www.glma.org/find_a_provider.php

^k Practice Committee of the American Society for Reproductive Medicine. Fertil Steril 2019;112:1022-1033; Oktay K, et al. J Clin Oncol 2018;36:1994-2001; Mulder RL, et al. Lancet Oncol 2021;22:e57-e67; Mulder RL, et al. Lancet Oncol 2021;22:e45-e56.

^l Lee JS, et al. J Clin Oncol 2006;24:2917-2931; Loren AW, et al. J Clin Oncol 2013;31:2500-2510; Oktay K, et al. J Clin Oncol 2018;36:1994-2001.

^m Practice Committee of the American Society for Reproductive Medicine. Fertil Steril 2019;112:1022-1033.

ⁿ Skinner R, et al. Lancet Oncol 2017;18:e75-e90.

^o van Dorp W, et al. J Clin Oncol 2016;34:3440-3450.

^p Lambertini M, et al. J Natl Cancer Inst 2022;114:400-408.

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