Clinical Policy: Fertility Preservation

Reference Number: CP.MP.130
Date of Last Revision: 09/22

Coding Implications
Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description

Fertility may be transiently or permanently affected by medical treatments such as gonadotoxic therapy, cytotoxic chemotherapy, or radiation therapy, as well as by other iatrogenic causes. Rates of permanent infertility and compromised fertility after medical treatment vary and depend on many factors, including the drug, size and location of the radiation field if applicable, dose, dose-intensity, method of administration (oral versus intravenous), disease, age, treatment type and dosages, and pretreatment fertility.

Policy/Criteria

I. It is the policy of health plans affiliated with Centene Corporation® that, when a covered benefit under the member's/enrollee's benefit plan contract, any of the following procedures are **medically necessary** for adults and adolescents with a female reproduction system prior to commencing treatment that is likely to cause infertility (excluding voluntary sterilization):
   A. Embryo cryopreservation;
   B. Cryopreservation of mature oocytes;
   C. Ovarian transposition (oophoropexy);
   D. Radiation (gonadal) shielding;
   E. Conservative gynecologic surgery including but not limited to the following:
      1. Radical trachelectomy in early stage cervical cancer (i.e., stage IA2 to IB cervical cancer with diameter <2 cm and invasion <10 mm);
      2. Ovarian cystectomy for early-stage ovarian cancer.

II. It is the policy of health plans affiliated with Centene Corporation that, when a covered benefit under the member's/enrollee's benefit plan contract, the following procedures are **medically necessary** for adults and adolescents with a male reproductive system prior to commencing treatment that is likely to cause infertility (excluding voluntary sterilization):
   A. Cryopreservation of sperm;
   B. Radiation (gonadal) shielding.

III. It is the policy of health plans affiliated with Centene Corporation that there is insufficient evidence in the published peer-reviewed literature to support the use of the following procedures for adults and adolescents with a female reproduction system prior to commencing treatment that is likely to affect fertility:
   A. Cryopreservation of immature oocytes;
   B. Ovarian tissue cryopreservation and transplantation procedures;
   C. Ovarian suppression with gonadotropin releasing hormone (GnRHa) or antagonists.

IV. It is the policy of health plans affiliated with Centene Corporation that there is insufficient evidence in the published peer-reviewed literature to support the use of the following

procedures for adults and adolescents with a male reproductive system prior to commencing treatment that is likely to affect fertility:

A. Testicular suppression with GnRHa or antagonists;
B. Testicular tissue or spermatogonial cryopreservation;
C. Reimplantation or grafting of human testicular tissue.

Background

The most frequent cause of impaired fertility in cancer survivors with a male reproductive system is chemotherapy or radiation-induced damage to sperm. The fertility of survivors with a female reproductive system may be impaired by any treatment that damages immature eggs, affects the body's hormonal balance, or injures the reproductive organs. Fertility preservation is an essential part of the management of adolescents and young adults who are at risk for infertility due to cancer treatments, or bilateral ovary or testicular removal for treatment of disease.

Embryo cryopreservation is an established fertility preservation method, and it has routinely been used for storing surplus embryos after in vitro fertilization. Cryopreservation of unfertilized oocytes is also an option. Success rates for this procedure have improved significantly, with some reproductive specialty centers reporting success rates comparable to those obtained using unfrozen eggs, especially in younger individuals. Like embryo cryopreservation, this technique also requires ovarian stimulation and ultrasound-guided oocyte retrieval.

The effectiveness of ovarian suppression with GnRHa or antagonists is inconclusive. There is conflicting evidence to recommend GnRHa as a method of fertility preservation. Studies to date have not provided definitive data demonstrating that GnRHa preserves fertility, and it remains the subject of ongoing research.

American Society of Clinical Oncology (ASCO)

ASCO's recommends discussing fertility preservation with all patients of reproductive age (and with parents or guardians of children and adolescents) if infertility is a potential risk of therapy, as early as possible, before treatment starts.

For those with a male reproductive system who express an interest in fertility preservation, sperm cryopreservation is the only established fertility preservation method. ASCO notes that in these patients hormonal therapy has not shown to be successful in preserving fertility. Per ASCO, other methods, including testicular tissue cryopreservation for the purpose of future reimplantation or grafting of human testicular tissue are experimental.

For those with a female reproductive system who express an interest in fertility preservation, both embryo and oocyte cryopreservation are established fertility preservation methods. Other options include ovarian transposition (oophoroexy) when pelvic radiation therapy for cancer treatment is performed or conservative gynecological surgery and radiation options. ASCO notes that evidence for ovarian tissue cryopreservation for the purpose of future transplantation is experimental. They note also, there is insufficient evidence regarding the effectiveness of ovarian suppression (gonadotropin-releasing hormone analogs) to preserve fertility.

The ASCO guidelines continue to note that there is conflicting evidence to recommend GnRHa and other means of ovarian suppression for fertility preservation. However, the Panel recognizes that, when proven fertility preservation methods are not feasible, and in the setting of young patients with breast cancer, GnRHa may be offered in the hope of reducing the likelihood of chemotherapy-induced ovarian insufficiency. GnRHa should not be used in place of proven fertility preservation methods. The panel notes that the field of ovarian tissue cryopreservation is advancing quickly and may evolve to become standard therapy in the future, although at the time of publication, it remains experimental.[9]

For children, ASCO recommends using established methods of fertility preservation (semen cryopreservation and oocyte cryopreservation) for post pubertal minor children, with patient assent, if appropriate, and parent or guardian consent.[1] For prepubertal children, the only fertility preservation options are ovarian and testicular cryopreservation, which are investigational.[9]

National Comprehensive Cancer Network (NCCN)
NCCN guidelines on Adolescent and Young Adult Oncology note that mature oocyte cryopreservation is no longer considered investigational, however, embryo cryopreservation is preferred if there is an identified sperm donor.[2]

Ovarian tissue cryopreservation is a promising, but less well-studied strategy for fertility preservation when there is insufficient time for oocyte or embryo cryopreservation and/or the patient is prepubertal. While tissue cryopreservation is still considered investigational at some institutions, it may be discussed as an option for fertility preservation.[2]

Some data suggest that menstrual suppression with GnRHa may protect ovarian function. However, evidence that menstrual suppression with GnRHa protect ovarian function is insufficient, so this procedure is not currently recommended as an option for fertility preservation.[2]

American College of Obstetricians and Gynecologists (ACOG)
For young individuals with a female reproductive system who have completed sexual development, GnRHa, such as leuprolide acetate, have been used to induce ovarian quiescence to preserve ovarian function and fertility after cytotoxic treatment. Leuprolide acetate is not recommended prior to puberty. There still is no conclusive evidence that demonstrates efficacy of GnRHa, and studies are primarily observational regarding their effectiveness in fertility preservation. The use of GnRHa should be considered and discussed with premenopausal patients who will be treated with chemotherapeutic agents. Because GnRHa have mixed results in fertility preservation with trends toward more favorable outcomes, GnRHa therapy may be recommended as an adjuvant to chemotherapy. A meta-analysis of those 14–45 years of age demonstrated that co-treatment with GnRH agonists during chemotherapy was associated with increased odds of maintaining ovarian function and achieving pregnancy after treatment.[10]

Coding Implications
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from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

CPT® Codes	Description
00840	Anesthesia for intraperitoneal procedures in lower abdomen including laparoscopy; not otherwise specified
57531	Radical trachelectomy, with bilateral total pelvic lymphadenectomy and para-aortic lymph node sampling biopsy, with or without removal of tube(s), with or without removal of ovary(s)
58825	Transposition, ovary(s)
58970	Follicle Puncture for oocyte retrieval, any method
76856	Ultrasound, pelvic (nonobstetric), real time with image documentation; complete
76948	Ultrasonic guidance for aspiration of ova, imaging supervision and interpretation
77334	Treatment devices, design and construction, complex (irregular blocks, special shields, compensators, wedges, molds or casts)
82670	Estradiol; total
83001	Gonadotropin; follicle stimulating hormone (FSH)
83002	Gonadotropin; luteinizing hormone (LH)
84144	Progesterone
84702	Gonadotropin; chorionic (hCG); quantitative
89250	Culture of oocyte(s)/embryo(s), less than 4 days
89251	Culture of oocyte(s)/embryo(s), less than 4 days; with co-culture of oocyte(s)/embryos
89254	Oocyte identification from follicular fluid
89258	Cryopreservation, embryo(s) (freezing services, not storage)
89259	Cryopreservation; sperm
89268	Insemination of oocytes
89272	Extended culture of oocytes/embryo(s), 4-7 days
89280	Assisted oocyte fertilization, microtechnique; less than or equal to 10 oocytes
89281	Assisted oocyte fertilization, microtechnique; greater than 10 oocytes
89320	Semen analysis; volume, count motility and differential
89337	Cryopreservation, mature oocyte(s)
89352	Thawing of cryopreserved; embryo(s)
89353	Thawing of cryopreserved; sperm/semen, each aliquot
99000	Handling and/or conveyance of specimen for transfer from office to a laboratory
99001	Handling and/or conveyance of specimen for transfer from the patient in other than an office to a laboratory (distance may be indicated)
99070	Supplies and materials (except spectacles), provided by the physician or other qualified health care professional over and above those usually included with the office visit or other services rendered (list drugs, trays, supplies, or materials provided)

CPT® Codes	Description
99078	Physician or other qualified health care professional qualified by education, training, licensure/regulation (when applicable) educational services in a group setting (eg, prenatal, obesity, or diabetic instructions)
99199	Unlisted special service, procedure or report

HCPCS Codes	Description
S4030	Sperm procurement and cryopreservation services; initial visit
S4031	Sperm procurement and cryopreservation services; subsequent visit

CPT Codes Considered Investigational

CPT® Codes	Description
89335	Cryopreservation, reproductive tissue, testicular
89398	Unlisted reproductive medicine laboratory procedure

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD 10 CM Code	Description
C00.0-D49	Neoplasms
D27.0	Benign neoplasm of right ovary
D27.1	Benign neoplasm of left ovary
D39.10-D39.12	Neoplasm of uncertain behavior of ovary
D40.10-D40.12	Neoplasm of uncertain behavior of testis
N70.01- N70.03	Acute salpingitis and oophorits
N70.11- N70.13	Chronic salpingitis and oophoritis
N83.511-N83.519	Torsion of ovary and ovarian pedicle
Z31.84	Encounter for fertility preservation procedure

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Policy adopted from Health Net NMP512, Fertility Preservation in Cancer Patients. Expanded criteria to include iatrogenic causes of infertility. Added the following ICD-10 codes: D27.0, D27.1, N70.03, N70.13, N83.51.	9/16	10/16
Added the following to medical necessity statements in I. and II: "when a covered benefit under the member's benefit plan contract." References reviewed and updated. Codes updates	09/17	10/17
Clarified I.B. that cryopreservation is medically necessary for "mature" oocytes; Under III, added A. Cryopreservation of immature oocytes, as investigational; Updated recommendations from professional societies in the background; references reviewed and updated; codes reviewed.	09/18	09/18
Annual review completed. Codes reviewed. References reviewed and updated. Specialty review completed.	09/19	09/19
Removed CPT 0375T – code deleted 1/1/20	04/20	

Reviews, Revisions, and Approvals	Revision Date	Approval Date
References reviewed and updated. Replaced 'members" with "members/enrollees" in all instances. Specialty review completed.	09/20	09/20
Revised description of CPT-82670. CPT-0058T deleted in 2021. "Experimental/investigational" verbiage replaced with descriptive language in policy statement III and IV.	02/21	
Annual review. References reviewed and updated. Changed "review date" in the header to "date of last revision" and "date" in the revision log header to "revision date."	09/21	09/21
Annual review. Replaced all instances of female and male with descriptive, gender-neutral verbiage. Added code 89398 to table of CPT codes considered investigational. References reviewed and updated.	05/22	05/22
In description, removed "male and female" from introductory sentence about medical causes of impaired fertility.	09/22	

References

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13. Oktay K, Sonmezer M. Cryopreservation options for fertility preservation. UpToDate. www.uptodate.com. Updated December 20, 2021. Accessed April 20, 2022.

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. "Health Plan" means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan's affiliates, as applicable.

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Note: For Medicaid members/enrollees, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members/enrollees, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at http://www.cms.gov for additional information.