JOHNS HOPKINS HEALTH PLANS	Johns Hopkins Health Plans **Medical Policy Manual** **Medical Policy**	*Policy Number*	CMS23.07
		Effective Date	04/01/2024
		Approval Date	01/16/2024
	Subject **Infertility Evaluation and Treatment**	*Supersedes Date*	11/01/2023
		Page	1 of 15

This document applies to the following Participating Organizations:

Advantage MD	EHP	Johns Hopkins Health Plan of Virginia Inc. (JHHPVA)	Priority Partners
US Family Health Plan			

Keywords: Fertility Preservation, In vitro fertilization, Infertility, IUI, IVF

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I. ACTION

	New Policy	
X	Revising Policy Number	CMS23.07
	Superseding Policy Number	
	Retiring Policy Number(s)	

II. POLICY DISCLAIMER

Johns Hopkins Health Plans (JHHP) provides a full spectrum of health care products and services for Advantage MD, Employer Health Programs, Johns Hopkins Health Plan of Virginia Inc., Priority Partners, and US Family Health Plan. Each line of business possesses its own unique contract, benefits, regulations, and regulators' clinical guidelines that supersede the information outlined in this policy.

III. POLICY

For Advantage MD refer to: Medicare Coverage Database

- No Local Coverage Determinations (LCD) or National Coverage Determinations (NCD) for Infertility Evaluation and Treatment identified. (Accessed 12/11/2023)
- Medicare Benefit Policy Manual, Chapter 15 - Covered Medical and Other Health Services 20.1 - Physician Expense for Surgery, Childbirth, and Treatment for Infertility

For Employer Health Programs (EHP) refer to:

- Plan specific Summary Plan Descriptions (SPD's)

For Johns Hopkins Health Plan of Virginia Inc. (JHHPVA) refer to: Medicare Coverage Database

- No Local Coverage Determinations (LCD) or National Coverage Determinations (NCD) for Infertility Evaluation and Treatment identified. (Accessed 12/11/2023)
- Medicare Benefit Policy Manual, Chapter 15 - Covered Medical and Other Health Services 20.1 - Physician Expense for Surgery, Childbirth, and Treatment for Infertility

For Priority Partners (PPMCO) refer to: Code of Maryland Regulations

- Code of Maryland Regulations (COMAR) 10.67.06.27 Benefits-Limitations
- Code of Maryland Regulations (COMAR) 10.09.58.06 Family Planning Program-Limitations
- Maryland Department of Health (MDH) PT 46-24 MCO Transmittal No. 195 Updates to Medicaid Coverage of Fertility Preservation Services Effective 10/7/2023
- Maryland Department of Health (MDH) Fertility Preservation (Clinical Criteria & Prior Authorization Requirements Effective 10/7/2023

For Uniformed Services Family Health Plan (USFHP) refer to: Tricare Policy Manuals

- TRICARE Policy Manual 6010.63-M, April 1, 2021 Chapter 4, Section 17.1 Female Genital System
- TRICARE Policy Manual 6010.63-M, April 1, 2021 Chapter 4, Section 15.1 Male Genital System
- TRICARE Policy Manual 6010.63-M, April 1, 2021 Chapter 7, Section 2.3 Family Planning
- TRICARE Policy Manual 6010.63-M, April 1, 2021 Chapter 6, Section 1.1 Pathology and Laboratory

IV. POLICY CRITERIA

A. General Considerations: When benefits are provided under the member's contract, the general conditions below apply for the evaluation or treatment of infertility. *Refer to member's Plan documents for any applicable wait periods.

1. A covered member must meet the JHHP definition of infertility:
    a. Failure to achieve conception after 12 months of unprotected heterosexual intercourse or medically supervised donor insemination for women < 35 years of age, and after 6 months of unprotected heterosexual intercourse or medically supervised donor insemination for women ≥ 35 years of age, OR:
    b. Known medical diagnoses causing infertility including, but not limited to:
        i. Stage III or IV endometriosis diagnosed surgically or evidence of endometriomas on imaging
        ii. Oligomenorrhea and/or amenorrhea
        iii. Blockage or surgical removal of one or both fallopian tubes or evidence of pelvic adhesions involving fallopian tubes on laparotomy or laparoscopy (excluding voluntary sterilization procedures)
        iv. Abnormal male factors, including oligospermia, OR;
    c. Recurrent pregnancy loss (two or more losses of clinical pregnancies), OR;
    d. Infertility related to covered gender-affirming treatment or procedures, OR;
    e. Advanced Reproductive Technology Services (IVF) requested for reasons other than infertility, not specifically listed above, must be reviewed in accordance with the member specific benefit plan document.

2. In all cases of infertility, the sequence of diagnostic and treatment services must follow a logical and cost-effective approach. (For example: when feasible, intrauterine insemination (IUI) prior to in vitro fertilization (IVF); frozen embryo IVF cycle prior to new fresh IVF cycle)
3. In general, JHHP Plans cover medically necessary services and procedures required to evaluate the etiology of infertility and to correct an identified physical cause of infertility (e.g. varicocele repair, pituitary disease treatment, lysis of pelvic or intrauterine adhesions, repair of uterine structural abnormalities, treatment of endometriosis and uterine fibroids, and disorders of sperm transport). For covered benefits and limitations, refer to the member's Plan specific documents.
4. If covered, the level of benefit coverage may differ by Plan for artificial insemination (AI), intrauterine insemination (IUI) and assistive reproductive technologies (ART); coverage, limitations, and applicable wait periods must be verified through the member's Plan specific documents.
5. Assistive reproductive technologies (ART) must be performed at a facility that conforms to the standards set by the American Society for Reproductive Medicine (ASRM).
6. If there is a discrepancy between this policy and a member's benefit plan document, the benefit plan document will govern.

B. Evaluation and Diagnosis of Etiology of Infertility: When benefits are provided under the member's contract, JHHP considers the following services medically necessary for evaluation and diagnosis of the cause of infertility:
1. History/physical/menstrual and reproductive history
2. Cultures for infections
3. Hormone level tests:
    a. Antimullerian hormone (AMH
    b. Estradiol at baseline (cycle days 2-4)
    c. Follicle stimulating hormone (FSH) at baseline
    d. Luteinizing hormone (LH)
    e. Progesterone
    f. Prolactin
    g. Testosterone (total and free)
    h. Thyroid stimulating hormone
4. Hysterosalpingogram
5. Hysteroscopy
6. Infectious disease screening for hepatitis B, hepatitis C, human immunodeficiency virus (HIV) and syphilis
7. Laparoscopy with or without chromotubation
8. Pelvic ultrasound (transabdominal or transvaginal)
9. Semen analysis (to evaluate semen volume, concentration, motility, pH, fructose, leukocyte count, microbiology, and morphology)
10. Sonohysterography or hysterosalpingo-contrast sonography
11. Testicular biopsy
12. Transrectal or scrotal ultrasound
13. Vasography

C. Treatment of Infertility: When benefits are provided under the member's contract, JHHP considers the following services medically necessary for the treatment of infertility. When a covered benefit, indicated limitations are applicable to all JHHP Plans:
1. Intrauterine Insemination (IUI) or Artificial Insemination (AI)
2. Assistive Reproductive Technologies (ART) using any combination of the following:
    i. In Vitro Fertilization with fresh embryo transfer (IVF)

ii. Frozen embryo transfer cycles (FET)

3. Sperm retrieval procedures:
   i. Testicular sperm extraction (TESE)
   ii. Testicular sperm aspiration (TESA)
   iii. Testicular fine needle aspiration (TEFNA)
   iv. Microsurgical epididymal sperm aspiration (MESA)
   v. Percutaneous epididymal sperm aspiration (PESA)
   vi. Vasal sperm aspiration
   vii. Seminal vesicle sperm aspiration
   viii. Electroejaculation
4. Intracytoplasmic sperm injection (ICSI)
5. Cryopreservation/freezing, storage, and thawing of sperm, mature oocytes, ovarian cortex (ovarian tissue), and embryos during the course of a covered infertility cycle
6. Reimplantation of ovarian cortex

D. Genetic Testing: For genetic testing (including pre-implantation genetic testing), refer to CMS07.03 Genetic Testing Policy: Genetic Testing Policy

E. Fertility Medications: Medications related to the treatment of infertility or fertility preservation are subject to the member's specific Plan documents and Plan Formularies.
1. Advantage MD Plans: Drugs used to promote fertility are *excluded* by Medicare. Refer to Plan specific Formularies: Advantage MD Formulary
2. EHP Plans: Consult Plan specific Formulary: Employer Health Program (EHP) Formularies
3. PPMCO: Pharmacy Formulary: Priority Partners (PPMCO) Formulary
4. USFHP: Utilizes the TRICARE Pharmacy Formulary: US Family Health Plan (USFHP) Formulary

F. Fertility Preservation: When benefits are provided under the member's contract, JHHP considers the following services medically necessary to preserve fertility prior to gonadotoxic therapies or surgery (e.g., chemotherapy, radiation, gonadal surgery), for treatment of disease, or for gender-affirming surgery:
1. Oocyte harvesting, sperm retrieval or ovarian cortex retrieval;
2. Cryopreservation/freezing and thawing of sperm, mature oocytes, ovarian cortex and embryos;
3. Storage of frozen sperm, oocytes, ovarian cortex, or embryos *(for EHP plans, up to 12 months storage may be approved when plan benefit allows).*

G. Limitations and Exclusions: Unless benefits are provided under the member's contract, JHHP considers the following infertility services not reasonable or not medically necessary, and therefore not covered:
1. Infertility treatment when infertility is caused or related to a previous voluntary sterilization procedure (*refer to Definitions section*)
2. Reversal of voluntary sterilization for the purposes of infertility treatment
3. Infertility treatment for a post-menopausal woman
4. Services associated with the use of a surrogate or gestational carrier.
5. Infertility services for a Plan member who is not infertile (e.g. ovarian stimulation for an egg donor, except as noted in F. above)
6. Supplies that can be purchased over-the-counter (e.g. ovulation or pregnancy test kits).

H. Experimental and Investigational: Unless benefits are provided under the member's contract, JHHP considers the following services experimental and investigational as they do not meet Technology Evaluation Criteria (TEC). Refer to: CMS01.00 Medical Policy Introduction

1. Cryopreservation/freezing, thawing, or storage of immature oocytes or testicular tissue
2. Reimplantation of cryopreserved testicular tissue
3. Leukocyte immunization (inoculation of a woman with paternal or donor white blood cells)
4. Microdissection of the zona or sperm microinjection
5. Co-culture of oocytes/embryos
6. In vitro maturation of oocytes
7. Growth hormone for infertility treatment
8. Intravenous immunoglobulins for treatment of infertility
9. Intravenous fat emulsions for treatment of infertility
10. Uterine and endometrial receptivity testing:
    a. Endometrial receptivity analysis (e.g. Igenomix)
    b. Uterine receptivity test for $ß_3$ (e.g. E-tegrity)
11. Uterine transplantation
12. Laser-assisted necrotic blastomere removal of cryopreserved embryos
13. The following sperm function tests:
    a. Acrosome reaction test
    b. Comet assay
    c. Computer-assisted sperm analysis (CASA) or computer-assisted sperm motion analysis
    d. Hemizona assay
    e. Hyaluronan binding assay
    f. Hypososmotic swelling test
    g. In vitro testing of sperm penetration
    h. Reactive oxygen species (ROS) test
    i. Sperm chromatin assay
    j. Sperm DNA condensation test
    k. Sperm DNA fragmentation assay
    l. Sperm nucleus maturation
14. Path SpermQT™ Epigenetic Sperm Quality Test
15. Any infertility service determined to be investigational or experimental

V. DEFINITIONS

Assisted Hatching: An ART procedure in which the zona pellucida of an embryo is either thinned or perforated by chemical, mechanical, or laser methods (Zeigers-Hochschild, 2017).

Assistive Reproductive Technologies (ART): All treatments which include the handling of eggs and sperm and/or embryos. Some examples of ART are in vitro fertilization (IVF), gamete intrafallopian transfer (GIFT), pronuclear stage tubal transfer (PROST), tubal embryo transfer (TET), and zygote intrafallopian transfer (ZIFT) (ASRM, 2018). In general, ART procedures involve surgically removing eggs from a woman's ovaries, combining them with sperm in the laboratory, and returning them to the woman's body or donating them to another woman. They do not include treatments in which only sperm are handled (i.e., intrauterine insemination (IUI) or artificial insemination (AI)), or procedures in which a woman takes medicine only to stimulate egg production without the intention of having eggs retrieved (Centers for Disease Control and Prevention (CDC), 2018).

Attempt: Any implantation of an embryo into the uterus and not the act of stimulating the ovaries to extrude oocytes. Each attempt is called a cycle.

Canceled ART Cycle: An ART cycle in which ovarian stimulation or monitoring has been initiated with the intention to treat, but which did not proceed to follicular aspiration or in the case of a thawed or warmed embryo did not proceed to embryo transfer (Zegers-Hochschild, 2017).

Cryopreservation: The process of slow freezing or vitrification to preserve biological material, (i.e. gametes, zygotes, embryos) at extremely low temperatures (Zegers-Hochschild, 2017).

Embryo Transfer Cycle: An ART cycle in which one or more fresh or frozen/thawed embryos are transferred into the uterus or fallopian tube (Zegers-Hochschild, 2017).

Endometriosis: A disease characterized by the presence of endometrium-like epithelium and stroma outside the endometrium and myometrium. Intrapelvic endometriosis can be located superficially on the peritoneum (peritoneal endometriosis), can extend 5 mm or more beneath the peritoneum (deep endometriosis), or can be present as an ovarian endometriotic cysts (endometrioma) (Zegers-Hochschild, 2017).

Gestational Carrier (GC): An embryo is created using the female intended parent's eggs or donor egg. The egg is fertilized by the male intended parent or a sperm donor. The embryo is transferred inside the carrier's uterus (egg source is not the GC) (HHS, 2018).

Infertility: A disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse (WHO), or six months if a woman is 35 or older (ASRM, 2020).

Intrauterine Insemination (IUI): A procedure where laboratory processed sperm is placed directly into the uterine cavity when a woman is ovulating to attempt pregnancy (Zegers-Hochschild, 2017).

Intracytoplasmic Sperm Injection (ICSI): A procedure in which a single sperm is injected into the oocyte cytoplasm (Zegers-Hochschild, 2017).

In Vitro Fertilization (IVF): An assisted reproduction technology (ART) where fertilization of eggs occurs outside of the body. Eggs are extracted and combined with a sperm sample in a laboratory. Embryos produced are then transferred into the woman's uterus, bypassing the fallopian tubes (ASRM, 2018).

In Vitro Maturation (IVM): A term that refers to the maturation culture of immature oocytes after their recovery from follicles that may or may not have been exposed to exogenous follicle stimulating hormone (FSH) but were not exposed to either exogenous luteinizing hormone (LH) or human gonadotropin (hCG) prior to retrieval to induce meiotic resumption. (ASRM 2013)

Luteal Phase Defect: A poorly defined abnormality of the endometrium presumably due to abnormally low progesterone secretion or action on the endometrium (Zegers-Hochschild, 2017).

Ovarian Reserve: A term generally used to indicate the number and/or quality of oocytes, reflecting the ability to reproduce (Zegers-Hochschild, 2017).

Ovarian Stimulation: Pharmacological treatment with the intention of inducing the development of ovarian follicles. It can be used for two purposes: 1) for timed intercourse or insemination; 2) in ART, to obtain multiple oocytes at follicular aspiration (Zegers-Hochschild, 2017).

Premature Ovarian Insufficiency (POI): A condition characterized by hypergonadotropic hypogonadism in women younger than age 40 years. Also known as primary ovarian insufficiency or premature ovarian failure. It includes women with premature menopause (Zegers-Hochschild, 2017).

Recurrent Pregnancy Loss: A disease distinct from infertility, defined by two or more failed pregnancies (ASRM).

Surrogacy: A woman who agrees to become pregnant using the man's sperm and her own egg (HHS, 2018).

Voluntary Sterilization: An elective surgical procedure performed as a permanent method of birth control. These include tubal sterilization and vasectomy procedures (ACOG, 2022). An elective surgical procedure performed as gender-affirming treatment is not considered voluntary sterilization.

VI. BACKGROUND

According to The American Society for Reproductive Medicine (ASRM), infertility is a disease which generates disability as an impairment of function. It is a condition sufficiently at variance with the usual state of health to make it appropriate for a person who is normally expected to be fertile to seek medical consultation and treatment. Infertility is defined as the inability to achieve a successful pregnancy following 12 months or more of regular unprotected intercourse or therapeutic donor insemination or following 6 months of unprotected intercourse or therapeutic donor insemination for females over 35 years of age.

In the United States, the incidence of infertility is estimated to range from 12 to 18 percent. Causes of infertility include ovarian aging, chromosomal abnormalities, acute and chronic medical conditions, treatments for certain conditions, male factors, female factors, and exposure to environmental, occupational, recreational, and infectious agents. The causes of infertility can be attributed to female factors 40% of the time, male factors 40% of the time and unexplained causes in up to 10- 20% of couples (Optum). Female factors can be categorized as tubal, ovarian (ovulatory), uterine, and cervical. Medical conditions that may contribute to female infertility include endometriosis, adenomyosis, polycystic ovary syndrome, primary ovarian insufficiency and diminished ovarian reserve, history of pelvic inflammatory disease, and uterine fibroids. Male factor infertility is often caused by low sperm count, abnormal sperm motility or blockages preventing the delivery of sperm. Contributory medical conditions impacting male fertility include varicocele, infection, hormonal imbalances, and chromosomal defects. Non-optimal weight can also adversely affect fertility for males and females. Women with a BMI of less than 18.5 experience a 4-fold longer time to pregnancy while women with a BMI of 30 or greater experience a 2-fold longer time to pregnancy when compared to women with the optimal BMI. Other life-style choices (i.e. cigarette smoking, excessive alcohol consumption) can also adversely affect fertility for both males and females.

Reasonable and necessary services associated with treatment for infertility are covered under Medicare. Medicare considers infertility a condition sufficiently at variance with the usual state of health to make it appropriate for a person who normally is expected to be fertile to seek medical consultation and treatment.

Services and treatment for infertility range from counseling to medication treatment to surgery. The CDC reports that the most common medical services received by women with infertility problems are advice (29%), testing of female and male factors (27%), ovulation induction medications (20%), intrauterine insemination (7%), surgery or treatment of tubal obstruction (3%), and assisted reproductive technologies (3%) (CDC, 2014).

The various components of assisted reproductive technologies (ART) and implantation into the uterus can be broadly subdivided into the oocyte harvesting procedure (oocyte retrieval), which is performed on the female partner; sperm collection procedures, which are performed on the male partner; and the in vitro component, which includes treatment of the collected oocyte and sperm. The final step is the implantation of the embryo into the uterus (embryo transfer).

Fertility preservation procedures are defined as those procedures indicated for an individual facing infertility due to chemotherapy, pelvic radiotherapy, gonadectomy or other iatrogenic treatment or procedure expected to render one permanently infertile. The American Society of Clinical Oncology (ASCO) Guideline (2018) recommends fertility preservation approaches should be discussed as early as possible, before treatment starts to preserve the full range of options including,

embryo and oocyte cryopreservation and sperm cryopreservation and banking. The American College of Obstetricians and Gynecologists (ACOG), in their committee opinion on children and adolescent cancer patients and survivors, recommended offering cryopreservation of oocytes or embryos before cancer treatment if there is adequate time and a safe method for ovarian stimulation. For prepubescent girls undergoing gonadotoxic therapy, the Practice Committee of the ASRM supports ovarian tissue banking to preserve fertility as ovarian stimulation is not an option (ASRM, 2019). The World Professional Association for Transgender Health (WPATH) Standards address fertility preservation for the transgender population, advising that decisions concerning fertility should be addressed prior to starting hormone therapy or undergoing genital surgery. Discussions should include reproductive options including sperm, oocyte and embryo cryopreservation to preserve the ability to parent genetically related children (WPATH, 2022).

VII. CODING DISCLAIMER

Note: The following CPT/HCPCS codes are included below for informational purposes and may not be all inclusive. Inclusion or exclusion of a CPT/HCPCS code(s) below does not signify or imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member's specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee of payment. Other policies and coverage determination guidelines may apply.

Note: All inpatient admissions require preauthorization.

Adherence to the provisions in this policy may be monitored and addressed through post payment data analysis and/or medical review audits
Advantage MD: Regulatory guidance supersedes JHHP Medical Policies. If there are no statutes, regulations, NCDs, LCDs, or LCAs, or other CMS guidelines, apply the Medical Policy criteria.
Employer Health Programs (EHP): Specific Summary Plan Descriptions (SPDs) supersedes JHHP Medical Policy. If there are no criteria in the SPD, apply the Medical Policy criteria.
Johns Hopkins Health Plan of Virginia Inc. (JHHPVA): Regulatory guidance supersedes JHHP Medical Policies. If there are no statutes, regulations, NCDs, LCDs, or LCAs, or other CMS guidelines, apply the Medical Policy criteria.
Priority Partners (PPMCO): Regulatory guidance supersedes JHHP Medical Policy. If there are no criteria in COMAR regulations, or other State guidelines, apply the Medical Policy criteria.
US Family Health Plan (USFHP): Regulatory guidance supersedes JHHP Medical Policy. If there are no TRICARE policies, or other regulatory guidelines, apply the Medical Policy criteria.

VIII. CODING INFORMATION

CPT® CODES ARE FOR INFORMATIONAL PURPOSES ONLY	
CPT® CODES	**DESCRIPTION**
54500	Biopsy of testis, needle (separate procedure)
54505	Biopsy of testis, incisional (separate procedure)
55400	Vasovasostomy, vasovasorrhaphy

55870	Electroejaculation
58321	Artificial insemination; intra-cervical
58322	Artificial insemination; intra-uterine
58323	Sperm washing for artificial insemination
58345	Transcervical introduction of fallopian tube catheter for diagnosis and/or re-establishing patency (any method), with or without hysterosalpingography
58350	Chromotubation of oviduct, including materials
58672	Laparoscopy, surgical; with fimbrioplasty
58673	Laparoscopy, surgical; with salpingostomy (salpingoneostomy)
58750	Tubotubal anastomosis
58825	Transposition, ovary(s)
58970	Follicle puncture for oocyte retrieval, any method
58974	Embryo transfer, intrauterine
74440	Vasography, vesiculography, or epididymography, radiological supervision and interpretation
74740	Hysterosalpingography, radiological supervision and interpretation
76831	Saline infusion sonohysterography (SIS), including color flow Doppler, when performed
76948	Ultrasonic guidance for aspiration of ova, imaging supervision and interpretation
80415	Chorionic gonadotropin stimulation panel; estradiol response This panel must include the following: Estradiol (82670 x 2 on 3 pooled blood samples)
82670	Estradiol
83001	Gonadotropin; follicle stimulating hormone (FSH)
83002	Gonadotropin; luteinizing hormone (LH)
84144	Progesterone
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
89253	Assisted embryo hatching, microtechniques (any method)
89254	Oocyte identification from follicular fluid
89255	Preparation of embryo for transfer (any method)
89257	Sperm identification from aspiration (other than seminal fluid)
89258	Cryopreservation; embryo(s)
89259	Cryopreservation; sperm
89260	Sperm isolation; simple prep (eg, sperm wash and swim-up) for insemination or diagnosis with semen analysis
89261	Sperm isolation; complex prep (eg, Percoll gradient, albumin gradient) for insemination or diagnosis with semen analysis

89264	Sperm identification from testis tissue, fresh or cryopreserved
89268	Insemination of oocytes
89272	Extended culture of oocyte(s)/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
89290	Biopsy, oocyte polar body or embryo blastomere, microtechnique (for pre-implantation genetic diagnosis); less than or equal to 5 embryos
89291	Biopsy, oocyte polar body or embryo blastomere, microtechnique (for pre-implantation genetic diagnosis); greater than 5 embryos
89300	Semen analysis; presence and/or motility of sperm including Huhner test (post coital)
89310	Semen analysis; motility and count (not including Huhner test)
89320	Semen analysis; volume, count, motility, and differential
89321	Semen analysis; sperm presence and motility of sperm, if performed
89322	Semen analysis; volume, count, motility, and differential using strict morphologic criteria (eg, Kruger)
89325	Sperm antibodies
89329	Sperm evaluation; hamster penetration test
89330	Sperm evaluation; cervical mucus penetration test, with or without spinnbarkeit test
89331	Sperm evaluation, for retrograde ejaculation, urine (sperm concentration, motility, and morphology, as indicated)
89335	Cryopreservation, reproductive tissue, testicular
89337	Cryopreservation, mature oocyte(s)
89342	Storage, (per year); embryo(s)
89343	Storage, (per year); sperm/semen
89344	Storage, (per year); reproductive tissue, testicular/ovarian
89346	Storage, (per year); oocyte
89352	Thawing of cryopreserved; embryo(s)
89353	Thawing of cryopreserved; sperm/semen, each aliquot
89354	Thawing of cryopreserved; reproductive tissue, testicular/ovarian
89356	Thawing of cryopreserved; oocytes, each aliquot
89398	Unlisted reproductive medicine laboratory procedure

HCPCS CODES ARE FOR INFORMATIONAL PURPOSES ONLY	
HCPCS CODES	**DESCRIPTION**

G0027	Semen analysis; presence and/or motility of sperm excluding Huhner
S3655	Antisperm antibodies test (immunobead)
S4011	In vitro fertilization; including but not limited to identification and incubation of mature oocytes, fertilization with sperm, incubation of embryo(s), and subsequent visualization for determination of development
S4015	Complete in vitro fertilization cycle, NOS case rate
S4016	Frozen in vitro fertilization cycle, case rate
S4017	Incomplete cycle, treatment canceled prior to stimulation, case rate
S4018	Frozen embryo transfer procedure canceled before transfer, case rate
S4020	In vitro fertilization procedure cancelled before aspiration, case rate
S4021	In vitro fertilization procedure cancelled after aspiration, case rate
S4022	Assisted oocyte fertilization, case rate
S4023	Donor Egg cycle, incomplete, case rate
S4025	Donor services for in vitro fertilization (sperm or embryo), case rate
S4026	Procurement of donor sperm from sperm bank
S4027	Storage of previously frozen embryos
S4028	Microsurgical epididymal sperm aspiration (MESA)
S4030	Sperm procurement and cryopreservation services; initial visit
S4031	Sperm procurement and cryopreservation services; subsequent visit
S4035	Stimulated intrauterine insemination (IUI), case rate
S4037	Cryopreserved embryo transfer, case rate
S4040	Monitoring and storage of cryopreserved embryos, per 30 days
S4042	Management of ovulation induction (interpretation of diagnostic tests and studies, non-face-to-face medical management of the patient), per cycle

	ICD10 CODES ARE FOR INFORMATIONAL PURPOSES ONLY
ICD10 CODES	**DESCRIPTION**
N46.01 - N46.9	Male infertility
N97.0 - N97.9	Female infertility

IX. REFERENCE STATEMENT

Analyses of the scientific and clinical references cited below were conducted and utilized by the Johns Hopkins Health Plans (JHHP) Medical Policy Team during the development and implementation of this medical policy. The Medical Policy Team

will continue to monitor and review any newly published clinical evidence and revise the policy and adjust the references below accordingly if deemed necessary.

X. REFERENCES

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XI. APPROVALS

Historical Effective Dates: 7/01/2019, 11/01/2021, 08/16/2022, 02/01/2023, 11/01/2023, 04/01/2024