# Molina Clinical Policy
# Infertility Evaluation and Treatments
# Policy No. 476

**Last Approval: 12/10/2025**
**Next Review Due By: December 2026**

## DISCLAIMER

This Molina Clinical Policy (MCP) is intended to facilitate the Utilization Management process. Policies are not a supplementation or recommendation for treatment; Providers are solely responsible for the diagnosis, treatment, and clinical recommendations for the Member. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (e.g., will be paid for by Molina) for a particular Member. The Member's benefit plan determines coverage – each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their Providers will need to consult the Member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a Member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid Members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this MCP and provide the directive for all Medicare members. References included were accurate at the time of policy approval and publication.

## OVERVIEW

**Infertility** is defined as a condition due to a patient's medical, sexual, and/or reproductive history, age, and/or physical findings, that results in an inability to achieve a successful pregnancy ([2]ASRM 2023). Globally, approximately 1 in 6 people have experienced infertility in their lifetime (WHO 2023). Infertility is diagnosed after an appropriate trial of egg and sperm contact; the length of which is based on maternal age. The exact etiology of infertility is often difficult to establish. Diagnostics may reveal reproductive abnormalities in a female, male, or both partners. However, there remains an uncertain causal relationship between abnormalities found in infertility diagnostics and the actual cause of infertility within a couple or person (Kuohung & Hornstein 2025). While statistics vary, approximately 37% of infertility is due to a female abnormality (i.e., female factor infertility), 8 – 26% is due to a male abnormality (i.e., male factor infertility), and approximately 35% is due to reproductive abnormalities in both partners. Additionally, sometimes no medical cause can be identified, resulting in unexplained infertility, which accounts for approximately 28% of infertility cases (Kuohung & Hornstein 2025).

Initial diagnostics to evaluate possible female factor infertility include a thorough reproductive history and physical, a comprehensive endocrine work up, and a hysterosalpingography to evaluate the reproductive tract (ACOG 2019; ASRM 2021; [1]ASRM 2024). In select cases, advanced imaging, such as a CT or MRI, or exploratory surgery is warranted (Grover et al. 2020; Wu et al. 2022). Conversely, initial diagnostics to evaluate possible male factor infertility include a thorough reproductive history and physical, a semen analysis, and advanced imagining for selected cases ([1-2]Schlegel et al. 2021).

Treatment for infertility is based on underlying etiology for the condition. There are a multitude of treatments, such as surgical correction of anatomic abnormalities, ovulation induction, assisted insemination, and donation of semen or eggs. **Assistive Reproductive Technology (ART)** are all treatments and procedures that involve the manipulation of human oocyte and sperm, or embryos outside of the body, including in vitro fertilization and intracytoplasmic sperm injection, to assist in establishing a pregnancy (Zegers-Hochschild et al. 2017). Engagement of ART services has steadily increased over the last few decades, in part to both expanded access to healthcare services and the advancement of these technologies.

**Preimplantation genetic testing (PGT)** can be done via biopsy of a blastocyst or polar bodies during an in vitro fertilization (IVF) cycle prior to implantation. There are a few different types of preimplantation genetic testing. PGT-M tests for monogenic disorders with the goal of implanting embryos unaffected by heritable pathogenic variants carried by one or both parents. PGT-SR tests for structural rearrangements with the goal of implanting embryos unaffected by structural chromosomal abnormalities in a couple with a balanced or unbalanced translocation. PGT-A screens for aneuploidy in an embryo from otherwise chromosomally normal parents. Due to mosaicism in the trophectoderm PGT results may have false-positive or false-negatives; therefore, traditional prenatal genetic testing (e.g., chronic villus sampling, genetic testing post amniocentesis) to confirm the results is recommended for any patients who undergo PGT (ACOG 2020).

## COVERAGE POLICY

### Evaluation and Treatment Limitations and Exclusions

For members who have had a voluntary sterilization procedure (e.g., vasectomy, tubal ligation, voluntary hysterectomy) with or without surgical reversal, infertility evaluations and treatment are **NOT considered medically necessary** as such services are the result of an elective procedure intended to prevent conception.

For Members age 40 years or older that have reached natural menopause (i.e.,1 year without menses) infertility evaluations and treatment are **NOT considered medically necessary** as menopause is not a disease state.

### Establishment of Infertility

Infertility evaluation may be **considered medically necessary** when Member meets the established criteria for an infertility diagnosis, defined as an inability to conceive after an appropriate trial of egg-sperm contact, in ONE of the following situations with accompanying medical record documentation:

1. For women under 35 years of age: An appropriate trial of egg-sperm contact requires 12 months of regular intravaginal inseminations *OR* 4 cycles of timed intrauterine or intracervical inseminations
2. For women 35 years of age and older: An appropriate trial of egg-sperm contact requires 6 months of regular intravaginal inseminations *OR* 3 cycles of timed intrauterine or intracervical insemination
3. For women 40 years of age or older who have not reached menopause: Immediate infertility evaluation is warranted
4. For women with a known risk factor for infertility (i.e., Irregular menstrual cycles, intermenstrual bleeding, oligomenorrhea, amenorrhea, known or suspected uterine/tubal/ peritoneal disease or endometriosis, genetic or acquired conditions that predispose to diminished ovarian reserve): Immediate infertility evaluation is warranted

### Diagnostic Procedures to Establish Etiology of Infertility

The following diagnostic evaluations and procedures may be **considered medically necessary** when performed solely to establish the underlying etiology of infertility:

***Female Evaluation***

1. Laboratory tests
    a. Endocrine evaluation:
        i. Thyroid stimulating hormone (TSH) for women with symptoms of thyroid disease
        ii. Adrenocorticotropic hormone (ACTH) for ruling out Cushing's syndrome or Addison's disease in women who are amenorrheic
        iii. Prolactin for women with galactorrhea, oligomenorrhea, or amenorrhea
        iv. Progestin (progesterone, 17-hydroxyprogesterone) measurements
        v. Estradiol measurements
        vi. Gonadotropins (serum follicle-stimulating hormone [FSH], luteinizing hormone [LH]) for women with irregular menstrual cycles or age-related ovulatory dysfunction
        vii. Anti-adrenal antibodies for apparently spontaneous primary ovarian insufficiency (premature ovarian failure)
        viii. Androgens (testosterone, androstenedione, dehydroepiandrosterone sulfate) for women with evidence of hyperandrogenism (e.g., hirsuitism, acne, signs of virilization) or ovulatory dysfunction
    b. Ovarian reserve testing (e.g., Anti-mullerian hormone (AMH) level, FSH, ultrasonography for antral follicle assessment, or clomiphene challenge test) for ANY of the following:
        i. Women over age 35
        ii. Family history of early menopause
        iii. Single ovary or history or previous ovarian surgery, chemotherapy, or pelvic radiation therapy
        iv. Unexplained infertility
        v. Previous poor response to gonadotropin stimulation
        vi. Planning treatment with assisted reproductive technologies

2. Imaging procedures
   a. Ultrasound to evaluate reproductive anatomy (i.e., sonohysterography)
   b. Hysterosalpingography
   c. MRI or CT imaging when ANY of the following criteria are met:
      i. Pelvic imaging for inconclusive or non-diagnostic hysterosalpingogram or sonohysterogram
      ii. Pelvic imaging for high suspicion of extensive pelvic inflammatory disease, complex tubo-ovarian pathologies, deep-seated endometriosis, Mullerian duct anomalies, uterine synechiae, or pelvic masses
      iii. Pituitary imaging for persistently elevated prolactin levels

3. Surgical procedures
   a. Diagnostic laparoscopy is **considered medically necessary** *EXCEPT* in women with unexplained infertility. Unexplained fertility is defined as the parameters of infertility being met yet basic infertility evaluations performed yielded normal results with evidence of ovulation, tubal patency, and a normal semen analysis.
   b. Hysteroscopy for ANY of the following indications:
      i. Suspected uterine abnormality as evidenced by abnormal hysterosalpingogram or hysterosonogram (e.g., endometrial polyp, submucosal myoma, intrauterine synechia (scarring), uterine anomaly etc…)
      ii. Proximal tubal occlusion on hysterosalpingogram
      iii. Cervical stenosis
      iv. Inconclusive or non-diagnostic hysterosalpingogram, sonohysterogram, or pelvic MRI

***Male Evaluation***

1. Laboratory tests
   a. Semen analysis: Two specimens at least one month apart, to evaluate semen volume, concentration, motility, pH, fructose, leukocyte count, microbiology, and morphology
   b. Endocrine evaluation: FSH, total and free testosterone, LH, prolactin for men with impaired libido, erectile dysfunction, oligozoospermia or azoospermia, atrophic testes, or evidence of hormonal abnormality on physical evaluation
   c. Karyotype and Y-chromosome microdeletion analysis for men with primary infertility and azoospermia or severe oligozoospermia (<5 million sperm/mL) with elevated FSH or testicular atrophy or a presumed diagnosis of impaired sperm production as the cause of azoospermia
   d. Cystic Fibrosis Transmembrane Conductance Regulator mutation carrier testing (including assessment of the 5T allele) for men with vasal agenesis or idiopathic obstructive azoospermia

3. Imaging procedures
   a. Transrectal ultrasound for men with semen analysis suggestive of ejaculatory duct obstruction (e.g., acidic, azoospermic, semen volume <1.5mL, with normal serum T, palpable vas deferens)
   b. Scrotal ultrasound

4. Surgical procedures
   a. Vasography and testicular biopsy for men with azoospermia
   b. Testicular biopsy for men with a normal semen volume, normal testicular volume, and FSH, without evidence of epididymal engorgement on exam

## Treatment of Infertility

The following treatments may be **considered medically necessary** in Members with a documented diagnosis of infertility and who meet procedural criteria, if applicable. In the absence of an official infertility diagnosis, fertility treatments are not considered medically necessary.

***Female Infertility Treatments***

1. Surgical Procedures: The following surgical procedures may be **considered medically necessary** to treat the underlying etiology of infertility in Members who meet the indications for the specific procedure:
   a. Hysteroscopic resection, vaporization, fulguration, and/or adhesiolysis for women who are found to have

intrauterine adhesions and/or endometriosis
   b. Hysteroscopic or fluoroscopic tubal cannulation (salpingostomy, fimbrioplasty), selective salpingography plus tubal catheterization, or transcervical balloon tuboplasty for women with proximal tubal obstruction
   c. Laparoscopy for treatment of reproductive pathology
   d. Ovarian wedge resection or ovarian drilling for women with WHO Group II ovulation disorders such as polycystic ovarian syndrome who have not responded to clomiphene citrate
   e. Removal of myomas, uterine septa, cysts, ovarian tumors, and polyps
   f. Surgical tubal reconstruction (unilateral or bilateral tubal microsurgery, laparoscopic tubal surgery, tuboplasty and tubal anastomosis) for women with mid or distal tubal occlusion and for women with proximal tubal disease where tubal cannulation has failed or where severe proximal tubal disease precludes the likelihood of successful cannulation
   g. Tubal ligation (salpingectomy) for women with hydrosalpinges who are contemplating in vitro fertilization

2. Intrauterine Insemination (IUI) may be **considered medically necessary** when the Member meets ALL the following criteria:
   a. Diagnosis of infertility is attributed to ONE of the following:
      i. Male factor infertility
      ii. Unexplained infertility
      iii. Polycystic Ovary Syndrome (PCOS), anovulation, or oligoovulation
      iv. Minimal or mild endometriosis
      v. Cervical factors (i.e., cervical trauma, surgical or conization procedures, anatomical irregularities)
      vi. Vaginismus diagnosis
      vii. Sexual dysfunction
   b. Diagnostic imaging report performed within 2 years demonstrating ALL the following:
      i. Tubal patency of at least one fallopian tube
      ii. An endometrial cavity that can reasonably support a pregnancy
   c. Utilization of viable sperm, as evidence by semen analysis, either from partner or sperm donor
   d. If member had prior IUI cycles, documentation of adequate ovarian response to stimulation must be provided (i.e., at least 2 follicles > 12 mm diameter or 1 follicle ≥ 15 mm)
   e. Member has more than a 5% chance of live birth

3. Intrauterine Insemination (IUI) *after* in vitro Fertilization (IVF) may be **considered medically necessary** for ANY of the following criteria:
   a. A spontaneous live birth has occurred after an unsuccessful IVF cycle
   b. Members who opt to use donor sperm after discovery of a male genetic disorder
   c. IUI after IUI–to–IVF conversion for hyperstimulation, if the stimulation that was initially given is reduced, and ALL the following:
      i. Estradiol level of ≥ 800 pg/ml
      ii. Production of at least 5 follicles > 12 mm in diameter
      iii. Age < 40

4. Oocyte or embryo donation may be **considered medically necessary** in Members > 40 years of age when female factor infertility is attributed to ANY of the following conditions:
   a. Congenital or surgical absence of ovaries
   b. Gonadal dysgenesis, including Turner syndrome
   c. High-risk of transmitting a genetic disorder from the female partner to the offspring
   d. Ovarian failure following chemotherapy or radiotherapy
   e. Premature ovarian failure (i.e., failure of ovulation in woman younger than 40 years of age)
      Note: Oocyte donation is considered medically necessary UNTIL the woman with premature ovarian failure is 45 years of age

   Oocyte or embryo donation is **NOT considered medically necessary** for age-related decline in egg quantity or quality, even if the member also has a medical cause of infertility which is normally treated by IVF.

5. In Vitro Fertilization (IVF) may be **considered medically necessary** in a Member with diagnosed infertility when ALL the following criteria are met:
   a. Member has failed to conceive after a trial of ovulation induction, if they are age 37 years or younger

Note: For women 38 years and older, no ovulation induction trial is necessary.

b. Member has had at least three failed IUI cycles, unless medically indicated to go straight to IVF due to ONE of the following conditions:
   i. Member is ≥ 40 years of age
   ii. Member has tubal factor infertility that cannot be surgically corrected, *OR* Member remains infertile despite pelvic surgery (i.e., bilateral tubal disease, failure to conceive with unilateral hydrosalpinx)
   iii. Inadvertent ovarian hyperstimulation (estradiol level was greater than 1,000 pg/ml plus greater than 3 follicles greater than 16 mm or 4 to 8 follicles greater than 14 mm or a larger number of smaller follicles) during preparation for a planned stimulated cycle in women less than 38 years of age
   iv. Diminished ovarian reserve
   v. Severe male factor infertility, if not utilizing semen donation
   vi. Congenital absence of reproductive organs
   vii. Endometriosis stage 4
c. Diagnostic imaging report within two years demonstrating an endometrial cavity that can reasonably support a pregnancy
d. Utilization of viable sperm, as evidence by semen analysis, either from partner or sperm donor *OR* Intracytoplasmic Sperm Injection. Note: Not applicable for frozen embryo transfer (FET)

6. **IVF protocol** for Members who meet above IVF medical necessity criteria:
   a. For Members < 35 years of age
      i. 1st IVF treatment cycle: Single embryo transfer (SET) is required
         1) If there are no top-quality embryos after thawing, then two or more embryos of any quality may be transferred
      ii. 2nd IVF treatment cycle:
         1) SET is required if no frozen embryos available
         2) Single thawed elective embryo transfer (STEET) is required if Member has one or more embryos frozen
         3) If there are no top-quality embryos after thawing, then two or more embryos of any quality may be transferred
      iii. 3rd and subsequent IVF treatment cycles do not need to be SET or STEET
   b. For Members < 38 years of age who have had a successful live birth from an IVF treatment cycle
      i. 1st IVF treatment cycle:
         1) SET is required if no frozen embryos available
         2) STEET is required if Member has one or more embryos frozen
         3) If there are no top-quality embryos after thawing, then two or more embryos of any quality may be transferred
      ii. 2rd and subsequent IVF treatment cycles do not need to be SET or STEET
   c. For Members 35-38 years of age:
      i. 1st IVF treatment cycle: SET is required
         1) If there are no top-quality embryos after thawing, then two or more embryos of any quality may be transferred
      ii. 2rd and subsequent IVF treatment cycles do not need to be SET or STEET
   d. Members > 38 years of age do not need to attempt a SET or STEET, as their risk of multiple births is low
   e. For Members with frozen embryos created in an IVF cycle not initially approved by Molina, the following criteria must be met before embryo transfer may be approved:
      i. Uterine cavity evaluation completed within the last 24 months
      ii. Diagnosis of infertility from treating provider
      iii. Fertility is naturally expected for member
   f. For all treatment cycles, all frozen eggs/embryos must be used before another cycle may be approved

7. Assisted Hatching may be **considered medically necessary** for women > 38 years of age with ANY of the following:
   a. Prior failed IVF cycles that produced three or more euploid embryos with failure to implant after embryo transfer
   b. Prior pregnancy resulting from IVF where assisted hatching was performed
   c. Thickened zona pellucida on microscopy

8. Transfer Procedures may be **considered medically necessary** when Member meets ALL the following criteria:
   a. Member meets criteria for IVF
   b. Member is receiving ONE of the following transfer procedures:
      i. Gamete intra-fallopian transfer (GIFT)
      ii. Zygote intra-fallopian transfer (ZIFT)
      iii. Tubal embryo transfer (TET)
      iv. Pronuclear stage tubal embryo transfer (PROST)
   c. Absence of ALL the following contraindications:
      i. Tubal disease
      ii. Severe uterine factor
      iii. Irreparable distortion of the uterine cavity

9. Intracytoplasmic Sperm Injection (ICSI) may be **considered medically necessary,** at a maximum of three cycles per attempted pregnancy**,** for ANY of the following:
   a. Severe deficits in semen quality or quantity, obstructive or non-obstructive, as evidenced by ANY of the following parameters, demonstrated on two separate semen analyses:
      i. Severe asthenozoospermia (less than 1% moving sperm)
      ii. Severe oligozoospermia (less than 5 million/ml)
      iii. Teratozoospermia (normal morphology in 4% or fewer observed sperm)
   b. To fertilize cryopreserved oocytes for IVF
   c. Previous IVF treatment cycle has resulted in failed or poor fertilization, defined as less than 50% fertilization
   d. Preimplantation genetic testing to be done prior to implantation
   e. Iatrogenic infertility due to chemotherapy, pelvic radiotherapy, other gonadotoxic therapies, or ovary or testicle removal for treatment of disease

***Male Infertility Treatments***

1. Surgical Procedures: The following surgical procedures may be **considered medically necessary** in Members who meet the indications for the specific procedure:
   a. Surgical varicocelectomy for men who have palpable varicocele(s), infertility, and abnormal semen parameters, *except* for azoospermic men
   b. Testicular sperm extraction (TESE) for men with non-obstructive azoospermia, severe asthenozoospermia, or ejaculatory dysfunction
   c. Microepididymal Sperm Aspiration (MESA) for congenital absence or obstruction of the vas deferens (typically diagnosed by the absence of fructose in semen) confirmed by exam
   d. Sperm retrieval or induced ejaculation, including sympathomimetic, vibratory stimulations, and electroejaculation for men with aspermia

2. Electroejaculation equipment may be **considered medically necessary** to overcome total anejaculation secondary to neurologic impairment

3. Semen Donation may be **considered medically necessary** when male factor infertility is attributed to ANY of the following:
   a. Two or more abnormal semen analyses at least 30 days apart within the last three months
   b. Ejaculatory dysfunction
   c. Severe deficits in semen quality in couples who do not wish to undergo intracytoplasmic sperm injection
   d. Female partner is Rh-negative and severely Rhisoimmunized, and the male partner is Rh-positive
   e. Where there is a high risk of transmitting a genetic disorder of the male partner to the offspring
   f. Where there is a high risk of transmitting an infectious disease (such as HIV) to the partner or offspring

## Cryopreservation

Cryopreservation, (storage and thawing) may be **considered medically necessary** when ONE of the following is met:

1. Cryopreservation of embryos when Member is currently in a medically necessary active infertility treatment

2. Cryopreservation of mature oocyte(s) when ALL the following are met:
   a. Member is currently in a medically necessary active infertility treatment
   b. IVF cycle uses fresh oocyte(s)
   c. There is an inability to obtain viable sperm for oocyte fertilization at the time of oocyte retrieval

Cryopreservation is considered **experimental, investigational and unproven** in ANY of the following circumstances:
1. Cryopreservation of immature oocytes, including in vitro maturation
2. Retrieval, cryopreservation, storage, thawing, and re-transplantation of testicular reproductive tissue
3. Retrieval, cryopreservation, storage, thawing, and re-transplantation of ovarian reproductive tissue

## Preimplantation Genetic Testing

Preimplantation genetic testing – monogenic or structural rearrangements (PGT-M, PGT-SR) may be **considered medically necessary** when ALL the following criteria are met:

1. Technical and clinical performance of the genetic test is supported by published peer-reviewed medical literature

2. Member has been diagnosed with a specific mutation(s) or a family history that places offspring at an increased risk for an inherited genetic disorder

3. Documentation of ALL the following:
   a. Genetic counselling report with full pedigree and family data
   b. Results of genetic testing, karyotypes, or other specific testing of the affected parent(s) or other family member, if applicable

4. PGT is performed for ANY of the following indications:
   a. To diagnose an autosomal dominant condition when at least one parent is known to have the genetic condition
   b. To diagnose an autosomal recessive condition when both parents are known carriers (e.g., cystic fibrosis, Tay-Sachs disease)
   c. To diagnose an embryo at risk for a disease-causing chromosome rearrangement when one parent is a known carrier of a balanced (e.g., Robertsonian translocation, inversion) or unbalanced chromosomal rearrangement (e.g., insertion, deletion) translocation
   d. To diagnose an X -linked condition when the female contributing the egg is known to be a carrier of an X-linked condition and the specific gene mutation has been identified or there is a documented family history of an X-linked disorder

5. The genetic disease, which the offspring is at an increased risk for, is associated with clinically significant morbidity or mortality

Preimplantation genetic testing – aneuploidy (PGT-A) is considered **experimental, investigational, and unproven** due to insufficient evidence in the peer-reviewed medical literature to establish long-term safety, efficacy, and effect on net health outcomes.

## Fertility Preservation

Fertility preservation services (e.g., cryopreservation of reproductive tissue, sperm, or oocytes) may be **considered medically necessary** when Member is to undergo medical treatment that will directly or indirectly result in iatrogenic infertility.

## Services and Procedural Limitations and Exclusions

The following services are **NOT considered medically necessary** or are considered **experimental, investigational, and unproven** due to insufficient evidence in the peer-reviewed medical literature to establish long-term safety, efficacy, and effect on net health outcomes:
1. Gender selection
2. Human zona binding assay (hemizona test)
3. Serum anti-sperm antibody testing

4. Sperm acrosome reaction test
5. Sperm DNA fragmentation assays
6. Advanced Sperm Selection Techniques (i.e., Physiological Intracytoplasmic Sperm Injection, Zeta potential, sorting by X or Y chromosome, magnetic activating cell sorting, etc.)
7. Sperm hyperactivation processing/techniques
8. Co-culture of embryos
9. Embryo toxic factor test (ETFL) or Natural killer cell assay
10. IVIG (Intravenous Immunoglobulin)
11. Granulocyte Colony Stimulating Factor (G-CSF)
12. Intralipid infusion
13. Ovulation kits
14. Post-coital testing
15. Artificial oocyte activation
16. In vitro maturation of eggs
17. Direct intraperitoneal insemination (DIPI)
18. Peritoneal ovum and sperm transfer (POST)
19. Genetic engineering
20. Egg harvesting or other infertility treatment performed during an operation not related to an infertility diagnosis
21. Elective egg freezing for fertility preservation
22. Endometrial Scratching
23. Embryo Glue (hyaluronic acid)
24. Human chorionic gonadotropin (hCG) infusion into the uterine cavity
25. Uterine artery vasodilation (i.e. sildenafil)
26. ICSI, IVF, TESE, MESA, donor sperm for abnormal semen analysis post voluntary sterilization reversal

**DOCUMENTATION REQUIREMENTS.** Molina Healthcare reserves the right to require that additional documentation be made available as part of its coverage determination; quality improvement; and fraud; waste and abuse prevention processes. Documentation required may include, but is not limited to, patient records, test results and credentials of the provider ordering or performing a drug or service. Molina Healthcare may deny reimbursement or take additional appropriate action if the documentation provided does not support the initial determination that the drugs or services were medically necessary, not investigational, or experimental, and otherwise within the scope of benefits afforded to the member, and/or the documentation demonstrates a pattern of billing or other practice that is inappropriate or excessive

## SUMMARY OF MEDICAL EVIDENCE

***Non-Randomized Studies, Retrospective Reviews, and Other Evidence***

Abdelbaki et al. (2025) published the results of a study that utilized live imaging of human and mice embryonic division to track mitotic errors up to 46 hours in the embryonic preimplantation stage. The purpose of the study was to evaluate mitotic errors, micronuclei formation and inheritance, and trophectoderm cell restriction at the blastocyst stage. The imaging revealed de novo mitotic chromosome segregation errors that may contribute to mosaic aneuploidy. However, despite mitotic errors and micronuclei formation, the human embryonic cells remained viable and continued dividing, which may contribute to mosaic aneuploidy at the blastocyst stage. The authors discussed how the data suggests that early embryonic cells have mechanisms for tolerating mitotic errors during preimplantation development and that these errors may be confined to the trophectoderm, leaving the inner embryo-fated cells unaffected. These results are important when discussing preimplantation genetic testing – aneuploidy (PGT-A), as the biopsied cells are removed from the trophectoderm and may lead to false-positives.

Shingshetty et al. (2024) published a report on the predictors of success after in vitro fertilization (IVF) after a comprehensive literature search that included all articles that reported one or more studies evaluating associations between predictors and pregnancy in infertile women undergoing a fresh or frozen autologous IVF and ICSI treatment. Female age was a key factor influencing live birth rate, with the highest livebirth rate being between ages 25-30, and steadily declined after age 35. Anovulation and unexplained infertility were the etiologies with the highest live birthrates, while associations were found that females with diminished ovarian reserve, tubal factor, or male factor infertility had the lowest livebirth rates. Length of infertility played a role in livebirth rates as well, with couples having the highest rates of success after 1 – 3 years of infertility, and a sharp decline in success after 7 years of infertility. Females with a previous live birth had a higher success rate, and the rate was higher still in those with a previous livebirth due to IVF. The review also explored embryo quality, day of transfer, semen parameters, and ethnicity in its results.

Chen et al. (2022) conducted a study to analyze the outcomes of intracytoplasmic sperm injection (ICSI) of couples who used testicular spermatozoa versus ejaculated spermatozoa from males with severe or complete asthenozoospermia. A total of 97 couples were included in the study and were divided into four groups based on sperm characteristics and extraction method: ejaculated progressive motile sperm group (Ep-group), ejaculated non-progressive motile sperm group (En-group), ejaculated immotile sperm group (Ei-group), and testicular sperm group (TESE-group). Sperm was obtained via testicular sperm extraction for those in the TESE group. The clinical pregnancy rate, defined as ultrasonographic visualization of one or more gestational sacs, was significantly higher in the Ep-group (65.4%, P = 0.019) and the TESE-group (63.6%, P = 0.035) than in the Ei-group (23.1%) and En-group (46.2%). The live birth rate was 57.7 % in the Ep-group, 50% in the TESE-group, 23.1% in the Ei-group, and 40.4% in the En-group. Starosta et al. (2020) published a report on the predictors of success for intrauterine insemination (IUI) after a comprehensive literature search that included retrospective and prospective cohort studies, randomized controlled trials, and systematic reviews and metanalyses that reported IUI outcomes. Livebirth rates begin to rise when the total motile count of sperm reaches at least 10 million/ml. Higher post wash sperm counts increased pregnancy rates up to 4 million/ml. The literature is inconsistent on male age as a predictive factor. However, the authors note a study conducted on 901 IUI cycles that found when female factors were controlled male age ≥ 35 years was a poor prognostic indicator. The study also found that female ovulatory dysfunction and more than 3 years of infertility were additional poor prognostic indicators for IUI.

**National/Specialty Organizations**

The **American College of Obstetricians and Gynecologists (ACOG)** published *Infertility Workup for the Women's Health Specialist: ACOG Committee Opinion, Number 781* (2019) detailing the appropriate exams, labs, imaging, and procedures for an infertility work up. This was affirmed by the **American Society for Reproductive Medicine (ASRM)** *Fertility evaluation of infertile women: a committee opinion* (2021) and *Current evaluation of amenorrhea: a committee opinion* ([1]2024) recommendations for a comprehensive female fertility work up.

The **ASRM** and the **American Urological Association (AUA)** published *Diagnosis and treatment of infertility in men: AUA/ASRM guideline part I* ([1]Schlegel et al. 2020) and *Diagnosis and treatment of infertility in men: AUA/ASRM guideline part II* ([2]Schlegel et al. 2020) detailing the appropriate exams, labs, imaging, and procedures for an infertility work up in men. The guidelines also detail appropriate treatments for various etiologies of male factor infertility.

The **ASRM** published *Gamete and embryo donation guidance* (2024) detailing donor screening and tests, recipient screening and tests, donor and recipient counseling, legal considerations, and more. The guidelines state the indications for donor gametes are as follows:

- Medical necessity indications for donor oocytes may include, but are not limited to: women with hypergonadotropic hypogonadism, advanced reproductive age, diminished ovarian reserve, who are known to be affected by or known to be the carriers of a significant genetic defect or who have a family history of a condition for which carrier status cannot be determined, and women with poor oocyte and/or embryo quality or multiple previous failed attempts to conceive using ART therapy.
- Medical necessity indications for donor sperm may include, but are not limited to: men with azoospermia, severe oligozoospermia or other significant sperm or seminal fluid abnormalities, men with ejaculatory dysfunction, prior failure to fertilize during IVF treatment after insemination with intracytoplasmic sperm injection, men with a significant genetic defect or a strong family history of a heritable disease, the couple has produced an offspring affected by a condition for which carrier status cannot be determined, and the female partner is Rh-negative and severely Rhisoimmunized, and the male partner is Rh-positive.

The **ASRM** and the **Society for Assisted Reproductive Technology (SART)** published *The use of preimplantation genetic testing for aneuploidy: a committee opinion* (2024) stating evidence to support the benefit of PGT-A in IVF patients has not been demonstrated. The ASRM acknowledges that there are some studies that report higher live-birth rates after PGT-A in favorable-prognosis patients; however, recent RCTs concluded that the overall pregnancy outcomes via frozen embryo transfer were similar between PGT-A and conventional in vitro fertilization.

The **ACOG** published *Preimplantation Genetic Testing: ACOG Committee Opinion, Number 799* (2020) stating:

- "Because of possible mosaicism, preimplantation genetic testing results from the trophectoderm may not reflect the genetic constitution of the inner cell mass … false-positive and false-negative results are possible."
- "Preimplantation genetic testing-monogenic (known as PGT-M) is targeted to single gene disorders. PGT-M uses only a few cells from the early embryo, usually at the blastocyst stage, and misdiagnosis is possible but

rare with modern techniques. Confirmation of preimplantation genetic testing-monogenic results with chorionic villus sampling (CVS) or amniocentesis should be offered."
- "To detect structural chromosomal abnormalities such as translocations, preimplantation genetic testing-structural rearrangements (known as PGT-SR) is used. Confirmation of preimplantation genetic testing-structural rearrangements results with CVS or amniocentesis should be offered."
- "The main purpose of preimplantation genetic testing-aneuploidy (known as PGT-A) is to screen embryos for whole chromosome abnormalities. Traditional diagnostic testing or screening for aneuploidy should be offered to all patients who have had preimplantation genetic testing-aneuploidy."

The **ASRM** published *Indications and management of preimplantation genetic testing for monogenic conditions: a committee opinion* (2023) affirming that PGT-M is primarily indicated to "prevent the transmission of severe, untreatable, or life-threatening childhood-onset conditions". While there are a few other indications for PGT-M, this test is recommended for patients who are identified to be at risk for identified genetic conditions. PGT-M is not indicated "where there is very little or no clinical utility", such as cases where only one parent is a confirmed carrier for an autosomal recessive condition, as PGT-M only identifies the presence or absence of the carrier parent's variant and cannot identify the presence or absence of a second variant. Pre-test genetic counseling is highly recommended.

The **European Society of Human Reproduction and Embryology (ESHRE)** published *ESHRE PGT Consortium good practice recommendations for the organisation of PGT* (Carvalho et al. 2020) in which the indications, limitations, and considerations for all PGT were stipulated. The recommendations were as follows:
- "PGT-M refers to testing for DNA pathogenic variant(s) causing (combinations of) monogenic disorders, X-linked, autosomal dominantly or recessively inherited, for which the disease-causing loci (nuclear or mitochondrial) has been unequivocally identified… it is acceptable to offer PGT for known X-linked recessive single gene disorders with a clear unequivocal clinical diagnosis where no pathogenic variant was found in the proband but low- and high-risk haplotypes can be identified based on the family history."
- "PGT-SR is an accepted and routine procedure … patients who are unable to achieve a pregnancy or at high risk of pregnancy loss and of abnormal live born births, resulting from inheritance of unbalanced products of the rearrangement … PGT-SR is only recommended if the technique applied is able to detect all expected unbalanced forms of the chromosomal rearrangement."
- "PGT-A remains heavily debated in clinical practice."

## SUPPLEMENTAL INFORMATION

| Abbrv. | Term | Definitions (Zegers-Hochschild et al. 2017) |
|---|---|---|
| | Assisted hatching | An ART procedure in which the zona pellucida of an embryo is either thinned or perforated by chemical, mechanical or laser methods. |
| ART | Assisted Reproductive Technology | All interventions that include the in vitro handling of both human oocytes and sperm or of embryos for the purpose of reproduction. This includes, but is not limited to, IVF and embryo transfer ET, intracytoplasmic sperm injection ICSI, embryo biopsy, preimplantation genetic testing PGT, assisted hatching, gamete intrafallopian transfer GIFT, zygote intrafallopian transfer, gamete and embryo cryopreservation, semen, oocyte and embryo donation, and gestational carrier cycles. ART does not include assisted insemination using sperm from either a woman's partner or a sperm donor |
| | Asthenozoospermia | Reduced percentage of motile sperm in the ejaculate below the lower reference limit. When reporting results, the reference criteria should be specified |
| | Azoospermia | Absence of spermatozoa in the ejaculate |
| | Cryopreservation | The process of slow freezing or vitrification to preserve biological material (e.g. gametes, zygotes, cleavage-stage embryos, blastocysts or gonadal tissue) at extreme low temperature |

| | | |
|---|---|---|
| FET | Frozen embryo transfer | An ART procedure in which cycle monitoring is carried out with the intention of transferring to a woman, frozen/thawed or vitrified/warmed embryo(s)/blastocyst(s) |
| GIFT | Gamete intrafallopian transfer | An ART procedure in which both gametes (oocytes and spermatozoa) are transferred into a Fallopian tube(s) |
| IVF | In vitro fertilization | A sequence of procedures that involves extracorporeal fertilization of gametes. It includes conventional in vitro insemination and ICSI |
| ICI | Intracervical/vaginal insemination | A procedure in which laboratory processed sperm are placed in the vaginal canal or cervix to attempt a pregnancy |
| ICSI | Intracytoplasmic sperm injection | A procedure in which a single spermatozoon is injected into the oocyte cytoplasm |
| IUI | Intrauterine Insemination | A fertility procedure where prepared sperm are directly inserted into the uterus during ovulation |
| TESE | Microdissection - Testicular Excisional Sperm Extraction | A surgical procedure using an operating microscope to identify seminiferous tubules that may contain sperm to be extracted for IVF and/or ICSI |
| MESA | Microepididymal Sperm Aspiration | A surgical procedure performed with the assistance of an operating microscope to retrieve sperm from the epididymis of men with obstructive azoospermia. In the absence of optical magnification, any surgical procedure to retrieve sperm from the epididymis should also be registered as MESE |
| | Oligozoospermia | Low concentration of spermatozoa in the ejaculate below the lower reference limit. When reporting results, the reference criteria should be specified. |
| OHSS | Ovarian hyperstimulation syndrome | An exaggerated systemic response to ovarian stimulation characterized by a wide spectrum of clinical and laboratory manifestations. It may be classified as mild, moderate or severe according to the degree of abdominal distention, ovarian enlargement and respiratory, hemodynamic and metabolic complications. |
| | Ovarian reserve | A term generally used to indicate the number and/or quality of oocytes, reflecting the ability to reproduce. Ovarian reserve can be assessed by any of several means. They include: female age; number of antral follicles on ultrasound; anti-Mullerian hormone levels; follicle stimulating hormone and estradiol levels; clomiphene citrate challenge test; response to gonadotropin stimulation, and oocyte and/or embryo assessment during an ART procedure, based on number, morphology or genetic assessment of the oocytes and/or embryos. |
| PGT | Preimplantation genetic testing | A test performed to analyze the DNA from oocytes (polar bodies) or embryos (cleavage stage or blastocyst) for HLA-typing or for determining genetic abnormalities. These include: PGT for aneuploidies (PGT-A); PGT for monogenic/single gene defects (PGT-M); and PGT for chromosomal structural rearrangements (PGT-SR). |
| | Premature ovarian insufficiency | A condition characterized by hypergonadotropic hypogonadism in women younger than age 40 years (also known as premature or primary ovarian failure). It includes women with premature menopause. |
| PROST | Pronuclear stage tubal embryo transfer | An ART procedure in which fertilized eggs, still in the pronuclear stage (before cell division), are transferred into the fallopian tubes |
| | Teratozoospermia | A reduced percentage of morphologically normal sperm in the ejaculate below the lower reference limits. When reporting results, the reference criteria should be specified. |

| | | |
|---|---|---|
| SET | Single embryo transfer | One embryo is transferred during an IVF cycle, this reduces risk of multiple gestations |
| STEET | Single thawed elective embryo transfer | One thawed embryo is transferred during an IVF cycle, this reduces risk of multiple gestations |
| TET | Tubal embryo transfer | An ART procedure that places a fertilized embryo directly into a woman's fallopian tube |
| | Unexplained infertility | Infertility in couples with apparently normal ovarian function, Fallopian tubes, uterus, cervix and pelvis and with adequate coital frequency; and apparently normal testicular function, genito-urinary anatomy and a normal ejaculate. The potential for this diagnosis is dependent upon the methodologies used and/or those methodologies available. |
| ZIFT | Zygote intrafallopian transfer | An ART procedure in which one or more zygotes is transferred into the Fallopian tube. |

## CODING & BILLING INFORMATION

**CPT (Current Procedural Terminology)**

| Code | Description |
|---|---|
| **0253U** | Reproductive medicine (endometrial receptivity analysis), RNA gene expression profile, 238 genes by next-generation sequencing, endometrial tissue, predictive algorithm reported as endometrial window of implantation (e.g., pre-receptive, receptive, post-receptive) |
| **0255U** | Andrology (infertility), sperm-capacitation assessment of ganglioside GM1 distribution patterns, fluorescence microscopy, fresh or frozen specimen, reported as percentage of capacitated sperm and probability of generating a pregnancy score |
| **52402** | Cystourethroscopy with transurethral resection or incision of ejaculatory ducts |
| **54500** | Biopsy of testis, needle (separate procedure) |
| **54505** | Biopsy of testis, incisional (separate procedure) |
| **54800** | Biopsy of epididymis, needle |
| **55200** | Vasotomy, cannulization with or without incision of vas, unilateral or bilateral (separate procedure) |
| **55300** | Vasotomy for vasograms, seminal vesiculograms, or epididymograms, unilateral or bilateral |
| **55530** | Excision of varicocele or ligation of spermatic veins for varicocele; (separate procedure) |
| **55535** | Excision of varicocele or ligation of spermatic veins for varicocele; abdominal approach |
| **55550** | Laparoscopy, surgical, with ligation of spermatic veins for varicocele |
| **55870** | Electroejaculation |
| **58140** | Myomectomy, excision of fibroid tumor(s) of uterus, 1 to 4 intramural myoma(s) with total weight of 250 g or less and/or removal of surface myomas; abdominal approach |
| **58145** | Myomectomy, excision of fibroid tumor(s) of uterus, 1 to 4 intramural myoma(s) with total weight of 250 g or less and/or removal of surface myomas; vaginal approach |
| **58146** | Myomectomy, excision of fibroid tumor(s) of uterus, 5 or more intramural myomas and/or intramural myomas with total weight greater than 250 g, abdominal approach |
| **58321** | Artificial insemination; intra-cervical |
| **58322** | Artificial insemination; intra-uterine |
| **58323** | Sperm washing for artificial insemination |
| **58340** | Catheterization and introduction of saline or contrast material for saline infusion sonohysterography (SIS) or hysterosalpingography |
| **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 |
| **58540** | Hysteroplasty, repair of uterine anomaly (Strassman type) |
| **58545** | Laparoscopy, surgical, myomectomy, excision; 1 to 4 intramural myomas with total weight of 250 g or less and/or removal of surface myomas |

| | |
|---|---|
| **58546** | Laparoscopy, surgical, myomectomy, excision; 5 or more intramural myomas and/or intramural myomas with total weight greater than 250 g |
| **58555** | Hysteroscopy, diagnostic (separate procedure) |
| **58559** | Hysteroscopy, surgical; with lysis of intrauterine adhesions (any method) |
| **58560** | Hysteroscopy, surgical; with division or resection of intrauterine septum (any method) |
| **58660** | Laparoscopy, surgical; with lysis of adhesions (salpingolysis, ovariolysis) (separate procedure) |
| **58662** | Laparoscopy, surgical; with fulguration or excision of lesions of the ovary, pelvic viscera, or peritoneal surface by any method |
| **58670** | Laparoscopy, surgical; with fulguration of oviducts (with or without transection) |
| **58672** | Laparoscopy, surgical; with fimbrioplasty |
| **58673** | Laparoscopy, surgical; with salpingostomy (salpingoneostomy) |
| **58700** | Salpingectomy, complete or partial, unilateral or bilateral (separate procedure) |
| **58740** | Lysis of adhesions (salpingolysis, ovariolysis) |
| **58752** | Tubouterine implantation |
| **58760** | Fimbrioplasty |
| **58770** | Salpingostomy (salpingoneostomy) |
| **58800** | Drainage of ovarian cyst(s), unilateral or bilateral (separate procedure); vaginal approach |
| **58805** | Drainage of ovarian cyst(s), unilateral or bilateral (separate procedure); abdominal approach |
| **58920** | Wedge resection or bisection of ovary, unilateral or bilateral |
| **58970** | Follicle puncture for oocyte retrieval, any method |
| **58974** | Embryo transfer, intrauterine |
| **58976** | Gamete, zygote, or embryo intrafallopian transfer, any method |
| **74440** | Vasography, vesiculography, or epididymography, radiological supervision and interpretation |
| **74740** | Hysterosalpingography, radiological supervision and interpretation |
| **74742** | Transcervical catheterization of fallopian tube, radiological supervision and interpretation |
| **76830** | Ultrasound, transvaginal |
| **76831** | Saline infusion sonohysterography (SIS), including color flow Doppler, when performed |
| **76856** | Ultrasound, pelvic (nonobstetric), real time with image documentation; complete |
| **76857** | Ultrasound, pelvic (nonobstetric), real time with image documentation; limited or follow-up (e.g., for follicles) |
| **76870** | Ultrasound, scrotum and contents |
| **76872** | Ultrasound, transrectal; |
| **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, total (82670 x 2 on 3 pooled blood samples) |
| **80426** | Gonadotropin releasing hormone stimulation panel This panel must include the following: Follicle stimulating hormone (FSH) (83001 x 4) Luteinizing hormone (LH) (83002 x 4) |
| **81224** | CFTR (cystic fibrosis transmembrane conductance regulator) (e.g., cystic fibrosis) gene analysis; intron 8 poly-T analysis (e.g., male infertility) |
| **82024** | Adrenocorticotropic hormone (ACTH) |
| **82157** | Androstenedione |
| **82166** | Anti-mullerian hormone (AMH) |
| **82397** | Chemiluminescent assay |
| **82627** | Dehydroepiandrosterone-sulfate (DHEA-S) |
| **82670** | Estradiol; total |
| **82671** | Estrogens; fractionated |
| **82672** | Estrogens; total |
| **82681** | Estradiol; free, direct measurement (e.g., equilibrium dialysis) |
| **83001** | Gonadotropin; follicle stimulating hormone (FSH) |
| **83002** | Gonadotropin; luteinizing hormone (LH) |
| **83498** | Hydroxyprogesterone, 17-d |
| **83520** | Immunoassay for analyte other than infectious agent antibody or infectious agent antigen; quantitative, not otherwise specified |

| | |
|---|---|
| **84144** | Progesterone |
| **84146** | Prolactin |
| **84270** | Sex hormone binding globulin (SHBG) |
| **84402** | Testosterone; free |
| **84403** | Testosterone; total |
| **84410** | Testosterone; bioavailable, direct measurement (e.g., differential precipitation) |
| **84443** | Thyroid stimulating hormone (TSH) |
| **84830** | Ovulation tests, by visual color comparison methods for human luteinizing hormone |
| **86255** | Fluorescent noninfectious agent antibody; screen, each antibody |
| **86256** | Fluorescent noninfectious agent antibody; titer, each antibody |
| **88182** | Flow cytometry, cell cycle or DNA analysis |
| **88248** | Chromosome analysis for breakage syndromes; baseline breakage, score 50-100 cells, count 20 cells, 2 karyotypes (e.g., for ataxia telangiectasia, Fanconi anemia, fragile X) |
| **88249** | Chromosome analysis for breakage syndromes; score 100 cells, clastogen stress (e.g., diepoxybutane, mitomycin C, ionizing radiation, UV radiation) |
| **88261** | Chromosome analysis; count 5 cells, 1 karyotype, with banding |
| **88262** | Chromosome analysis; count 15-20 cells, 2 karyotypes, with banding |
| **88263** | Chromosome analysis; count 45 cells for mosaicism, 2 karyotypes, with banding |
| **88273** | Molecular cytogenetics; chromosomal in situ hybridization, analyze 10-30 cells (e.g., for microdeletions) |
| **88280** | Chromosome analysis; additional karyotypes, each study |
| **88283** | Chromosome analysis; additional specialized banding technique (e.g., NOR, C-banding) |
| **88285** | Chromosome analysis; additional cells counted, each study |
| **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 (e.g., sperm wash and swim-up) for insemination or diagnosis with semen analysis |
| **89261** | Sperm isolation; complex prep (e.g., 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 (e.g., 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(s) |
| **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 (Healthcare Common Procedure Coding System)**

| Code | Description |
|---|---|
| **J0725** | Injection, chorionic gonadotropin, per 1,000 USP units |
| **J3355** | Injection, urofollitropin, 75 IU |
| **S0122** | Injection, menotropins, 75 IU |
| **S0126** | Injection, follitropin alfa, 75 IU |
| **S0128** | Injection, follitropin beta, 75 IU |
| **S0132** | Injection, ganirelix acetate, 250 mcg |
| **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 |
| **S4013** | Complete cycle, gamete intrafallopian transfer (GIFT), case rate |
| **S4014** | Complete cycle, zygote intrafallopian transfer (ZIFT), case rate |
| **S4015** | Complete in vitro fertilization cycle, not otherwise specified, case rate |
| **S4016** | Frozen in vitro fertilization cycle, case rate |
| **S4017** | Incomplete cycle, treatment cancelled prior to stimulation, case rate |
| **S4018** | Frozen embryo transfer procedure cancelled 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, nonface-to-face medical management of the patient), per cycle |
| **G0027** | Semen analysis; presence and/or motility of sperm excluding Huhner |
| **Q0115** | Postcoital direct, qualitative examinations of vaginal or cervical mucous |

**CODING DISCLAIMER.** Codes listed in this policy are for reference purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement. Listing of a service or device code in this policy does not guarantee coverage. Coverage is determined by the benefit document. Molina adheres to Current Procedural Terminology (CPT®), a registered trademark of the American Medical Association (AMA). All CPT codes and descriptions are copyrighted by the AMA; this information is included for

informational purposes only. Providers and facilities are expected to utilize industry standard coding practices for all submissions. When improper billing and coding is not followed, Molina has the right to reject/deny the claim and recover claim payment(s). Due to changing industry practices, Molina reserves the right to revise this policy as needed.

## APPROVAL HISTORY

**12/10/2025** New policy. IRO Peer Review on November 26, 2025, by a practicing physician board-certified in Reproductive Endocrinology/Infertility.

## REFERENCES

1. Abdelbaki, A., McCarthy, A., Karsa, A. et al. Live imaging of late-stage preimplantation human embryos reveals de novo mitotic errors. Nat Biotechnol (2025). https://doi.org/10.1038/s41587-025-02851-1
2. American College of Obstetricians and Gynecologists. Infertility Workup for the Women's Health Specialist: ACOG Committee Opinion, Number 781. Obstet Gynecol. 2019 Jun;133(6):e377-e384. doi: 10.1097/AOG.0000000000003271. PMID: 31135764.
3. American College of Obstetricians and Gynecologists. Preimplantation Genetic Testing: ACOG Committee Opinion, Number 799. Obstet Gynecol 2020;135:e133–7. Reaffirmed 2025. https://www.acog.org
4. American Society for Reproductive Medicine. Practice Committee of the American Society for Reproductive Medicine. Fertility evaluation of infertile women: a committee opinion. Fertil Steril. 2021 Nov;116(5):1255-1265. doi: 10.1016/j.fertnstert.2021.08.038. Epub 2021 Oct 2. PMID: 34607703.
5. [1]American Society for Reproductive Medicine. Practice Committee of the American Society for Reproductive Medicine. Clinical management of mosaic results from preimplantation genetic testing for aneuploidy of blastocysts: a committee opinion. Fertil Steril. 2023 Nov; 120(5): 973-982. doi: 10.1016/j.fertnstert.2023.08.969
6. [2]American Society for Reproductive Medicine. Practice Committee of the American Society for Reproductive Medicine. Definition of infertility: a committee opinion. Fertil Steril. 2023 Dec;120(6):1170. doi: 10.1016/S0015-0282(23)01971-4. PMID: 40991339.
7. [1]American Society for Reproductive Medicine. Practice Committee of the American Society for Reproductive Medicine. Current evaluation of amenorrhea: a committee opinion. Fertil Steril. 2024 Jul;122(1):52-61. doi: 10.1016/j.fertnstert.2024.02.001. Epub 2024 Mar 6. PMID: 38456861.
8. [2]American Society for Reproductive Medicine. Practice Committees of the American Society for Reproductive Medicine and the Society for Assisted Reproductive Technology. The use of preimplantation genetic testing for aneuploidy: a committee opinion. Fertil Steril. 2024 Sep;122(3):421-434. doi: 10.1016/j.fertnstert.2024.04.013. Epub 2024 May 18. PMID: 38762806.
9. [3]American Society for Reproductive Medicine. Practice Committee of the American Society for Reproductive Medicine and the Practice Committee for the Society for Assisted Reproductive Technology. Gamete and embryo donation guidance. Fertil Steril. 2024 Nov;122(5):799-813. doi: 10.1016/j.fertnstert.2024.06.004. Epub 2024 Jul 6. PMID: 38970576.
10. Chen T, Fan D, Wang X, et al. ICSI outcomes for infertile men with severe or complete asthenozoospermia. Basic Clin Androl. 2022 Apr 5;32(1):6. doi: 10.1186/s12610-022-00155-x. PMID: 35382740; PMCID: PMC8981622.
11. ESHRE PGT Consortium Steering Committee; Carvalho F, Coonen E, Goossens V, Kokkali G, Rubio C, Meijer-Hoogeveen M, Moutou C, Vermeulen N, De Rycke M. ESHRE PGT Consortium good practice recommendations for the organisation of PGT. Hum Reprod Open. 2020 May 29;2020(3):hoaa021. doi: 10.1093/hropen/hoaa021. PMID: 32524036; PMCID: PMC7257038.
12. Grover SB, Antil N, Katyan A, Rajani H, Grover H, Mittal P, Prasad S. Niche role of MRI in the evaluation of female infertility. Indian J Radiol Imaging. 2020 Jan-Mar;30(1):32-45. doi: 10.4103/ijri.IJRI_377_19. Epub 2020 Mar 30. PMID: 32476748; PMCID: PMC7240899.
13. Kuohung W, Hornstein MD. Overview of infertility. Updated September 19, 2025. Literature review current as of October 2025. Accessed November 10, 2025. https://www.uptodate.com.
14. [1]Schlegel PN, Sigman M, Collura B, et al. Diagnosis and Treatment of Infertility in Men: AUA/ASRM Guideline Part I. J Urol. 2021 Jan;205(1):36-43. doi: 10.1097/JU.0000000000001521. Epub 2020 Dec 9. PMID: 33295257.
15. [2]Schlegel PN, Sigman M, Collura B, et al. Diagnosis and Treatment of Infertility in Men: AUA/ASRM Guideline PART II. J Urol. 2021 Jan;205(1):44-51. doi: 10.1097/JU.0000000000001520. Epub 2020 Dec 9. PMID: 33295258.
16. Shingshetty L, Cameron NJ, Mclernon DJ, Bhattacharya S. Predictors of success after in vitro fertilization. Fertil Steril. 2024 May;121(5):742-751. doi: 10.1016/j.fertnstert.2024.03.003. Epub 2024 Mar 16. PMID: 38492930.
17. Starosta A, Gordon CE, Hornstein MD. Predictive factors for intrauterine insemination outcomes: a review. Fertil Res Pract. 2020 Dec 11;6(1):23. doi: 10.1186/s40738-020-00092-1. PMID: 33308319; PMCID: PMC7731622.
18. World Health Organization (WHO). Infertility Prevalence Estimates, 1990 – 2021. Published April 3, 2023. Accessed November 10, 2025. https://www.who.int/publications/i/item/978920068315.
19. Wu V, Mar W, Milad MP, Horowitz JM. Magnetic Resonance Imaging in the Evaluation of Female Infertility. Curr Probl Diagn Radiol. 2022 Mar-Apr;51(2):181-188. doi: 10.1067/j.cpradiol.2020.11.011. Epub 2021 Jan 9. PMID: 33487486.
20. Zegers-Hochschild F, Adamson GD, Dyer S, et al. S. The International Glossary on Infertility and Fertility Care, 2017. Hum Reprod. 2017 Sep 1;32(9):1786-1801. doi: 10.1093/humrep/dex234. PMID: 29117321; PMCID: PMC5850297.