



NYU Langone Fertility Center

IN VITRO FERTILIZATION

New Patient Orientation



Welcome to the NYULFC IVF Orientation Class.

Section 1: NYULFC Overview

Critical Information for IVF Cycles at NYULFC

Section 2: IVF

The IVF Process:

Ovulation Induction
Oocyte Retrieval
Embryology

Section 3: Embryo Transfer

The Embryo Transfer:

Fresh ET
Frozen ET
Pregnancy Monitoring

Section 4: Wellness

Wellness & Support for NYULFC Patients

Section 5: Research

Research Studies & Participation Options



Hello & Welcome!

Haley Penny, LMSW

Health Educator
NYU Langone Fertility Center

NYU Langone Fertility

660 First Avenue, 5th Floor
New York, NY, 10016



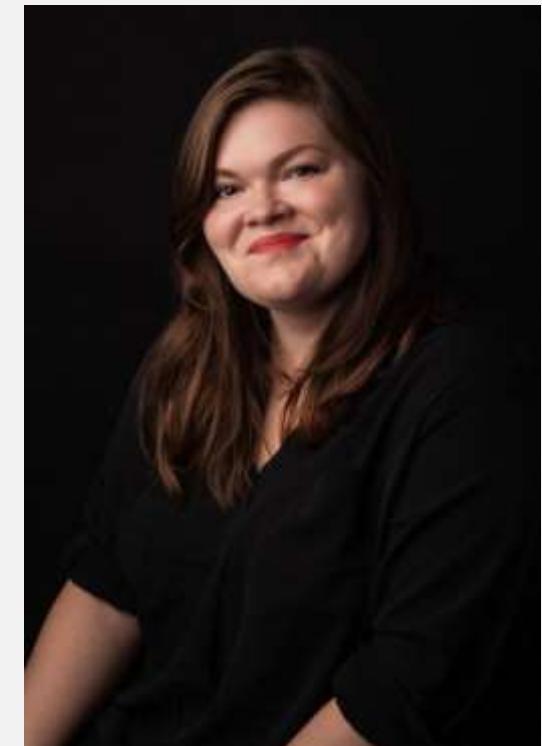
E: Haley.Penny@nyulangone.org



T: 212-263-8990

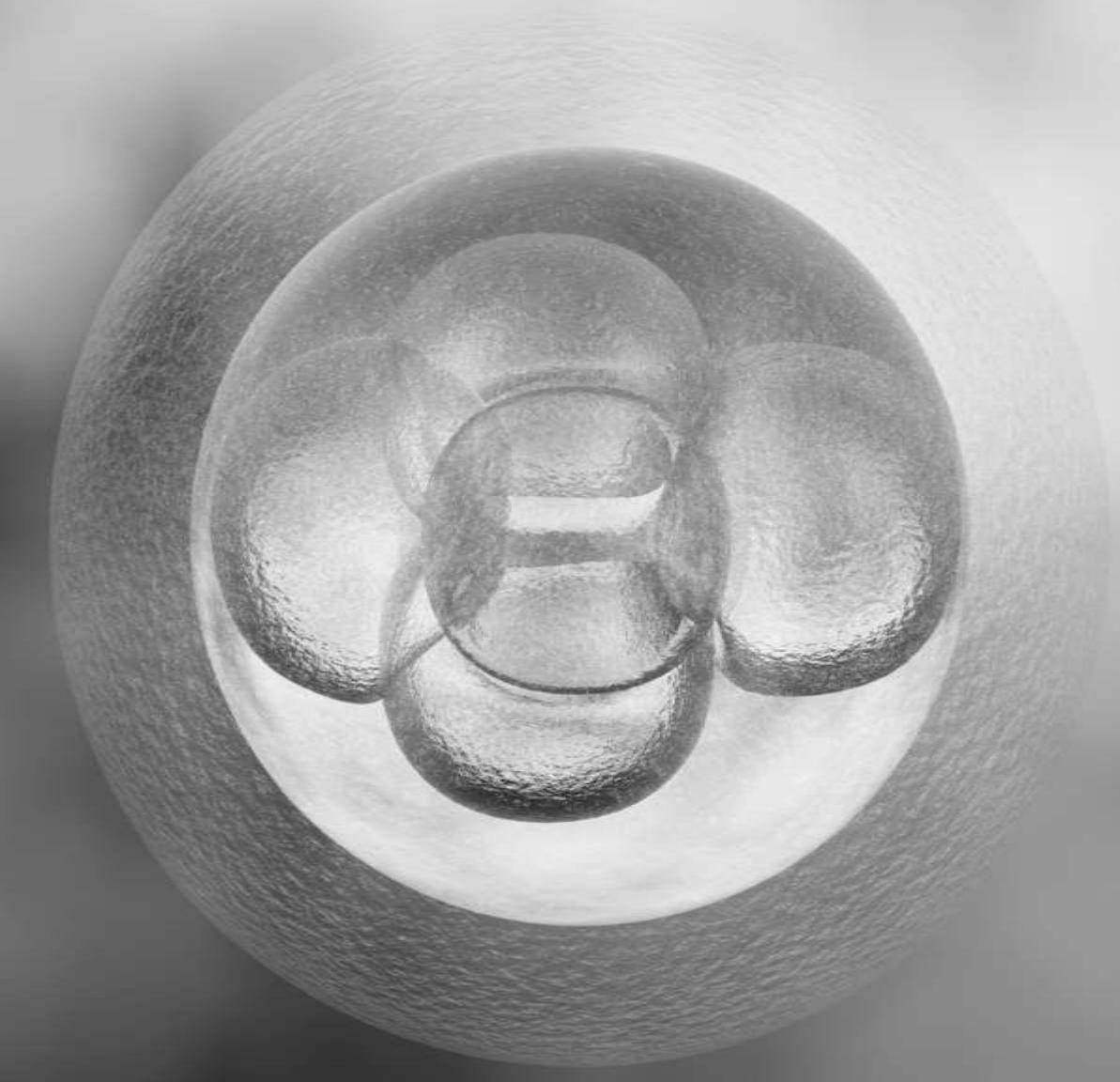


F: 212-263-7853



Section 1: NYULFC Overview

Critical Information for IVF Cycles



Important Announcements: Your NYULFC Patient Portal Account

NYU Langone Fertility Center (NYULFC) uses a Patient Portal to communicate with all patients undergoing treatment.

If you do not already have a patient portal account, please send me an email immediately (Haley.Penny@nyulangone.org). I will make sure your care team issues an invitation today.

The NYULFC Patient Portal is the primary method of communication for all patients. Please plan to check your Patient Portal messages daily during your cycle.

Please Note: The NYULFC Patient Portal is not connected to the Epic MyChart portal used throughout the NYU Langone Health system. Epic's electronic medical record does not support fertility cycle management. Your NYULFC treatment information will only be accessible in the NYULFC Patient Portal.

Current NYULFC Office Locations

Main Office



**660 First Avenue, 5th & 6th Floors
New York, NY, 10016**

212-263-8990

NoMad Satellite



**109 West 27th Street, 9th Floor
New York, NY, 10001**

212-263-0040

We're Moving! Coming Soon...

New! Main Office



53rd Street
between Lexington
and Third Avenue

July 2022 (Move Date Pending)

159 East 53rd Street – 3rd Floor

212-263-8990

New! Westchester Satellite

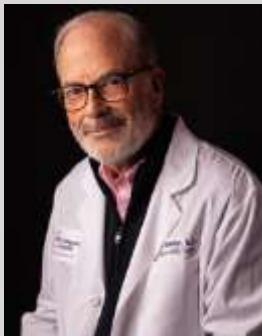


Located next to the
Bronxville Metro North
Railroad Station &
Downtown Bronxville

Opening January 2023

132 Parkway Road – 2nd Floor
Bronxville, New York

Meet the NYULFC Physician Team



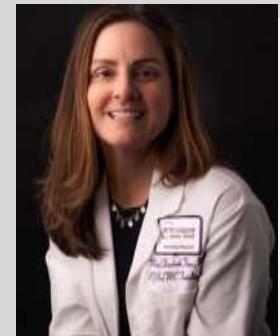
Alan Berkeley, MD



Jennifer Blakemore, MD



Shannon DeVore, MD



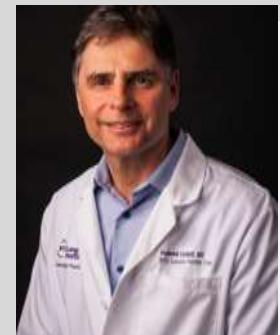
Elizabeth Fino, MD



James Grifo, MD, PhD

Brooke Hodes Wertz,
MD, MPH

David Keefe, MD



Frederick Licciardi, MD

**World Class Outcomes.
Expert & Exceptional Care.
Constant Collaboration.**

Our physicians have over 140 years collective experience performing IVF. Each member of the NYULFC physician team is dedicated to delivering exceptional clinical care, and all members of the team collaborate daily to deliver best-in-class outcomes for NYULFC patients.

NYULFC operates on a "Doctor-of-the-Day" model, which means one physician is assigned to perform all surgical procedures each day. You will see your physician throughout your treatment cycle, and your physician will direct your care plan (including medication dosage, monitoring frequency, and other clinical directives), however it is possible that your physician may not be the one assigned to perform surgery on the date of your procedure.

During your care at NYULFC, you may also meet our staff physician, Dr. Lisa Kump. While Dr. Kump is no longer accepting new patients, she provides outstanding care for all patients in-cycle at the Fertility Center.

Reproductive Endocrinology Fellows



Nirali Shah Jain, MD



Jacquelyn Shaw, MD



Sarah Cascante, MD



Ashley Wiltshire, MD

NYULFC is part of the Division of Reproductive Endocrinology and Infertility (REI) at NYU School of Medicine's Department of Obstetrics and Gynecology.

We host a 3-YR fellowship training program in REI approved by the American Board of Obstetrics and Gynecology.

Fellows are licensed physicians and have completed a 4-YR residency in OB-GYN prior to sub-specializing in REI.

Throughout your time at the NYULFC, you will interact with our fellows who provide clinical care and on-call responsibilities (including emergencies).

Genetic Counseling

Andria Besser is a Board-Certified Genetic Counselor and the Director of Reproductive Genetics at NYULFC.

Indications for Genetic Counseling include:

- Personal or family history of genetic disease, chromosome abnormality, or birth defect
- Couples who both carry the same autosomal recessive genetic disease
- Female carriers of X-linked diseases

Available by appointment.

Contact our Genetics Coordinator, Sylvia Wadowiec, at Sylvia.Wadowiec@nyulangone.org or 212-263-0054 to schedule a phone consultation.



Andria Besser, MS

Carrier Screening for Recessive Genetic Diseases

NYULFC uses the laboratory "Sema4" for carrier screening. Carrier screening can help detect if an individual is at risk of having a baby with a specific inherited disorder. Carrier screening is performed via bloodwork or saliva sample.

Preimplantation Genetic Testing for Aneuploidy (PGT-A)

NYULFC uses the laboratory "Coopergenomics" for PGT-A. PGT-A can help to screen an embryo for genetic abnormalities. **If you are considering PGT, a phone consult with a Coopergenomics Genetics Counselor is required.**

Please note that NYUFC does not provide testing or genetic counseling for hereditary cancers such as BRCA1/BRCA2.

These appointments are available through the NYU Perlmutter Cancer Center (646-754-1376).



Patient Care Coordinators

Your Patient Care Coordinator serves as your point person throughout your treatment cycle.

At NYULFC, each physician collaborates directly with a Patient Care Coordinator to form a “Physician Pod” or care team.

When contacting your Patient Care Coordinator, please email:

FertilityCoordinators@nyulangone.org

and copy your dedicated Coordinator.

Patients of Dr. Alan Berkeley & Dr. Frederick Licciardi

Rose Polidura

212-263-6498

FertilityCoordinators@nyulangone.org
Rose.Polidura@nyulangone.org

Patients of Dr. James Grifo

Maribel Feliciano

212-263-7967

FertilityCoordinators@nyulangone.org
Maribel.Feliciano@nyulangone.org

Patients of Dr. Brooke Hodes Wertz

Kimown Peters

646-754-1253

FertilityCoordinators@nyulangone.org
Kimown.Peters@nyulangone.org

Patients of Dr. Elizabeth Fino

Joanna Marrero-Constantine

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FertilityCoordinators@nyulangone.org
Joanna.Marrero-constantine@nyulangone.org

Patients of Dr. David Keefe & Dr. Jennifer Blakemore

Lisa Valentine

212-263-6498

FertilityCoordinators@nyulangone.org
Lisa.Valentine@nyulangone.org

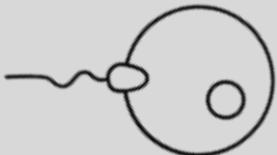
Patients of Dr. Shannon DeVore

Emily Hawkins

212-263-3659

FertilityCoordinators@nyulangone.org
Emily.Hawkins@nyulangone.org

Embryology and Andrology Laboratory Schedule



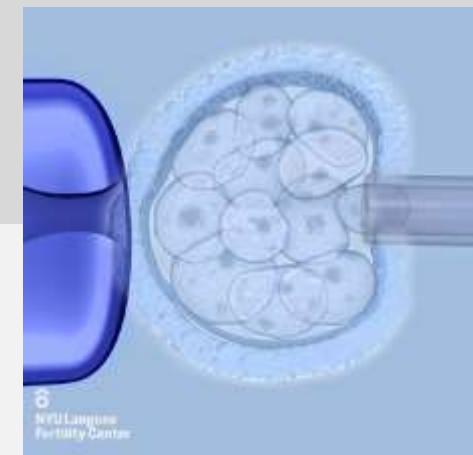
The NYULFC embryology, andrology, & endocrinology laboratories are located on the 6th Floor at 660 First Avenue.

NYULFC's laboratories close for 10 days each December to perform extended cleaning and maintenance (**“December Downtime”**).

NYULFC continues to provide monitoring, consultations, and non-IVF procedures during the closure periods.

Please contact your Patient Coordinator with any questions you have regarding the laboratory downtime period.

Your Coordinator will make sure you can complete your cycle prior to the December closure.



Prerequisite Tests & Appointments

Please note, all required tests (i.e. “checklist”) and insurance pre-certification **must be completed** prior to the start of your cycle. **Failure to complete all checklist items or consents will delay your treatment.**

The checklist pictured above is a generic guideline. You will receive a customized checklist from your Patient Care Coordinator.

Please inform us if you or your partner have any medical conditions or allergies, or are on any prescription medications or herbal supplements. Some medical conditions will require documented clearance from your personal physician prior to treatment. (*Cardiology, Nephrology, etc.*)

Your “Advance Directive” (if you have one) should be provided at the start of treatment. Information is available from your MD’s assistant.

Consents

NYULFC partners with EngagedMD to deliver consent forms and video education modules directly to your email inbox.



You will receive your consent forms via email, and you will be required to verify your identity when you sign.

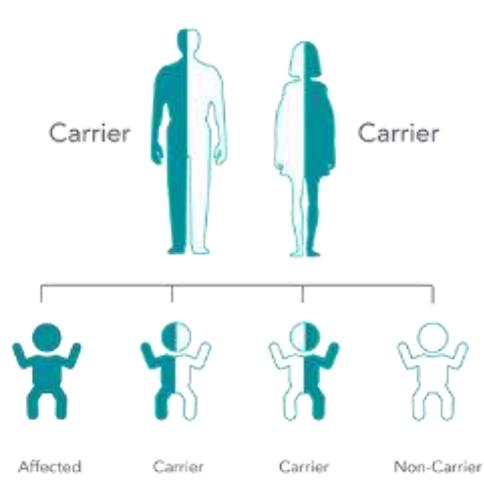
You will be asked to scan your driver's license or passport using your phone.

All consents must be complete prior to cycle start.



Genetic Testing: Carrier Screening

Carrier screening is strongly recommended for all patients and/or couples. If performed, results must be complete prior to cycle start.



Carrier screening involves a blood or saliva test to analyze +200 genes to detect if an individual is at risk of having a baby with a specific inherited genetic disorder.

Most diseases tested are autosomal recessive, and there is only a high risk if **both** people contributing the egg and the sperm are carriers for the **same** disease.

A few diseases are X-linked, and female carriers alone can have a high risk.

If a high risk is identified, a Genetic Counselor will discuss your options.

Most people (regardless of age) will test positive for at least one disease, and the vast majority have no family history. **Please be aware that routine embryo testing (PGT) will NOT test for these conditions, which is why it is important to perform carrier screening prior to embryo creation.**

NYULFC uses the laboratory **"Sema4"** for carrier screening. Complimentary genetic counseling is provided by Sema4, and is mandatory prior to cycle start for anyone with positive results.



Anesthesia Evaluation

The retrieval is performed using monitored anesthesia care. In some cases, NYULFC will require an anesthesia clearance.

Anesthesia clearance is required:

- If the patient's weight is greater than 200 lbs, and/or if the patient's BMI is indicative of obesity
- If the patient has an illness that may compromise the airway or ability to breathe

In these cases, the patient must see the anesthesiologist for an examination of the airway and to determine intravenous access **before starting medications**.

If the anesthesiologist concludes the airway is compromised or IV access cannot be determined, the patient will **NOT** be cleared for anesthesia.

In these cases, the procedure may be cancelled, or the patient may have to undergo the egg retrieval without anesthesia. Alternatively, the patient may be asked to delay treatment until sufficient weight can be lost, or until medical clearance can be obtained.

IVF Medication Pre-Certification

Insurance Coverage

If you have insurance coverage for fertility treatments, pre-certification for your medications in addition to procedures is most often required by your insurer prior to beginning treatment.

We will assist you with the process, but all information must be provided based on your individual insurance requirement and it is ultimately your responsibility to assure the pre-certification process is complete. Every cycle, even repeat treatments, must be authorized in advance.

Pre-Certification

You must allow 3 weeks for the pre-certification process to be complete. Please provide all forms required by your pharmacy plan and contact one of our Medication Authorization Coordinators for further information:

Nati Marte	(212) 263-0392
Joanne Healy	(212) 263-0037
Vicki Salinas	(212) 263-0375
Michelle Headley	(212) 263-2707
Bianca Remache	(212) 263-6175

Pharmacy Benefit Plan

Your pharmacy benefit plan will determine the brand and quantity of medication that can be dispensed for your treatment cycle at any one time.

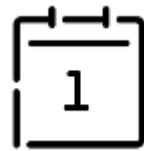
Patients must be aware of their own pharmacy benefit and its limitations. We can assist you, but we are unable to circumvent the benefit requirements.



Reservation for Cycle Start

Reservation Requirement

A Cycle Start Reservation



is required for all patients undergoing care at NYU Langone Fertility Center.

Reservation Timing

To account for variation in menstrual cycle timing, all Cycle Start Reservations are honored within a 7-day window of the confirmed date

Example: if your reservation for Day 2 Start is confirmed for the 14th of a month, your reservation will be honored between the 7th and the 21st of the month.

How do I make a Reservation?

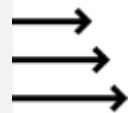
Please contact your Patient Care Coordinator to make a Day 2 Cycle Start Reservation.

Your Coordinator will book your Cycle Start Reservation. Your Coordinator will also call you 1-week prior to your anticipated menses to confirm your Reservation.



What is a “Day 2” Start?

Day 1 of your menstrual cycle is considered full flow menstrual period before midnight (not staining or spotting).



Day 2 is the following day.

Note: if your period arrives late at night, do not call the overnight emergency service. In the morning, please call our office at 212-263-8990 for Day 3 cycle start instructions.

If you are taking birth control, this will be 4 days after the last active pill.



Cycle Monitoring

The **average** number of days of injectable stimulation medications is **10-12 days**, however this will vary based on your body's individual response to the medications.

The cycle calendar pictured above and included in your information packet is a generic guideline and will change as your cycle progresses.

On Day 2 of your menstrual cycle, you will receive an appointment to visit our office between the hours of 7AM – 9AM for your “Day 2 Cycle Start.”

At your Day 2 visit, you will receive bloodwork and an ultrasound.

Following your Day 2 visit, you will receive a phone call with instructions from a nurse. The nurse will notify you if you can begin injectable medications that evening.

Your medications, the dosage, and the number of days until you return for your second morning monitoring visit have been predetermined by your doctor.

After your second morning monitoring visit, you will receive another phone call with instructions from a nurse, as your medication dosage may change throughout your cycle depending on your body's individual response to the medications.

Ready to Start?

Please call your Patient Coordinator between 8AM-4PM on the day prior to your:

- Day-2 start date for an IVF or FET cycle
- Day-1 Microdose Lupron® start date
- Day-21 Lupron® start date

Information to Share

When calling, provide your **name** (spell it out, please!), **date of birth**, **treating physician**, and **cycle type** (IVF).

Notifying us prior to your cycle start will allow our team to prepare your chart before you arrive.

Morning Monitoring at NYULFC

When & Where

Morning Monitoring services, including bloodwork and ultrasound, are available at both offices (Main Office & NoMad Satellite).

Morning Monitoring occurs between **7AM – 9AM**, 7 days per week.

Appointments are required for morning monitoring.

Afternoon Portal Messages

Expect a [portal message](#) or (in rare cases) a phone call from a nurse during the afternoon following your morning monitoring visit.

Please be sure to check your NYULFC Patient Portal account each day for important medication updates!

As a back-up, please provide us with the best phone number (with voicemail!) to reach you between 12PM – 5PM.

Please follow all instructions delivered by your nurse.

Contact Information

Questions?

Please message your care team using the NYULFC Patient Portal or call the main office at **212-263-8990**.

The best time to reach our nursing staff is between 10AM – 5PM ET.

Onsite Safety & COVID-19

NYULFC and the NYU Langone Health system are managing COVID-19 risks together, and the safety of our patients and staff is our top priority.

If you are experiencing a medical emergency, please call 911. If you are not feeling well, please do not come to the office. Please seek treatment from your primary care provider, and contact your NYULFC nurse to inform us of your illness. Your physician will collaborate with you to determine the appropriate next steps in your care plan.

At NYULFC, are utilizing all guidance available from ASRM, the CDC, the New York State Department of Health, and NYU Langone Health to institute safety precautions. Please be aware of new social distancing and safety practices at NYULFC.

1) Masks are mandatory.



All patients and staff are required to wear a mask while onsite. Please plan to arrive wearing your mask, and please keep your mask on for the duration of your visit.

2) Appointments are required.

In order to reduce the number of individuals in our waiting areas, each patient will receive an appointment for morning monitoring. To protect the safety of our patients and staff, patients will only be allowed to enter the Center during their scheduled appointment.

3) Guests are not permitted.

To minimize the number of individuals onsite, only the scheduled patient will be admitted to the facility. All patients visiting NYULFC for morning monitoring, bloodwork, or imaging scans must attend without any visitors present. Children are not permitted onsite. We apologize for any inconvenience. We are committed to protecting the safety of our patients and staff by limiting the number of individuals in our space.

4) Patients may be screened for temperature and health at entry to any NYU facility.

Every individual entering NYULH may be asked to pass a temperature screening and/or may be screened for COVID-19 related symptoms. We regret the necessity of this intrusion upon your time.

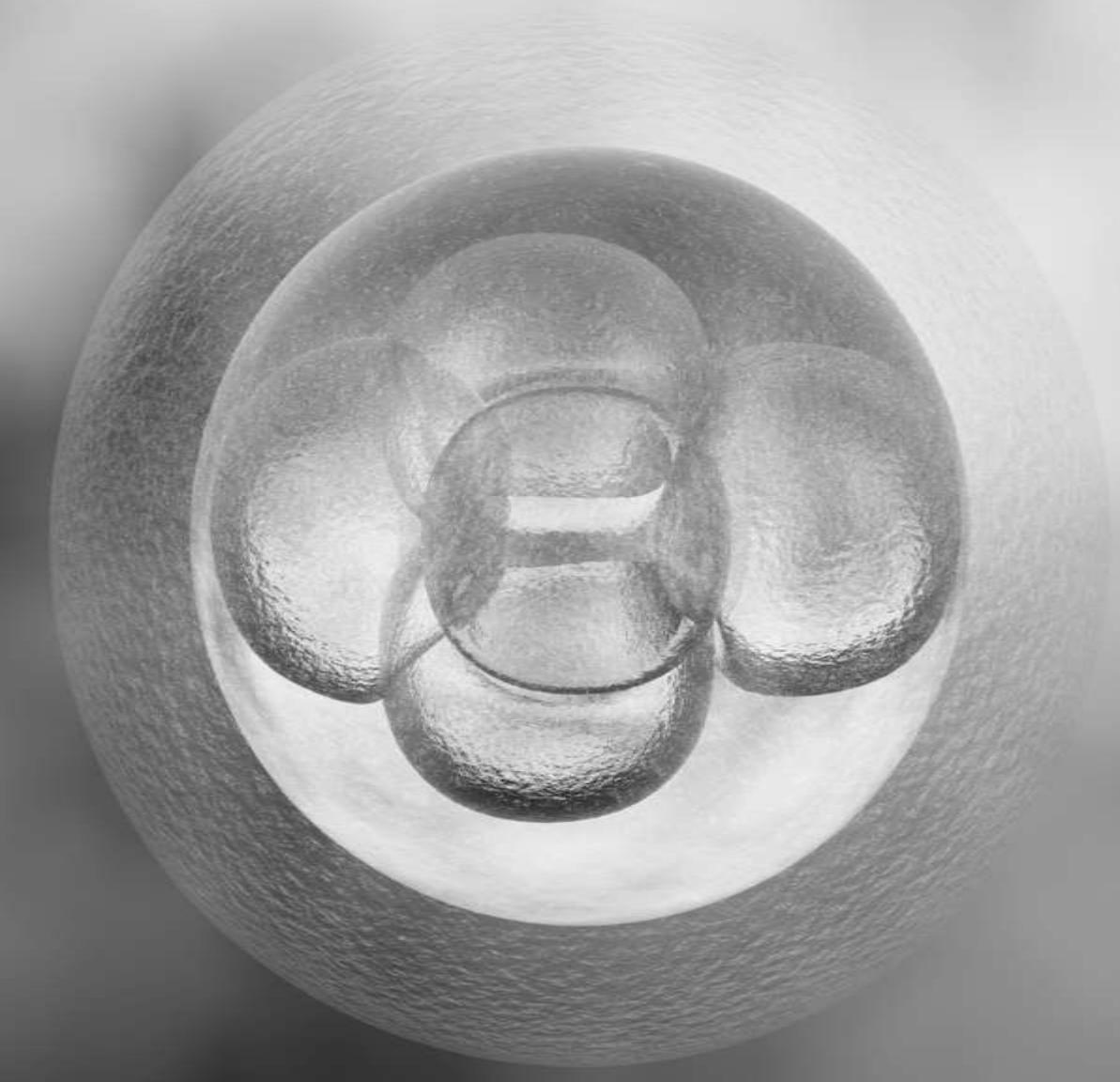
5) Cycle Disruption Policy

If an individual demonstrates symptoms of COVID-19 related illness during a treatment cycle, or if the individual is mid-cycle and tests positive for COVID-19, the cycle will be cancelled or suspended.

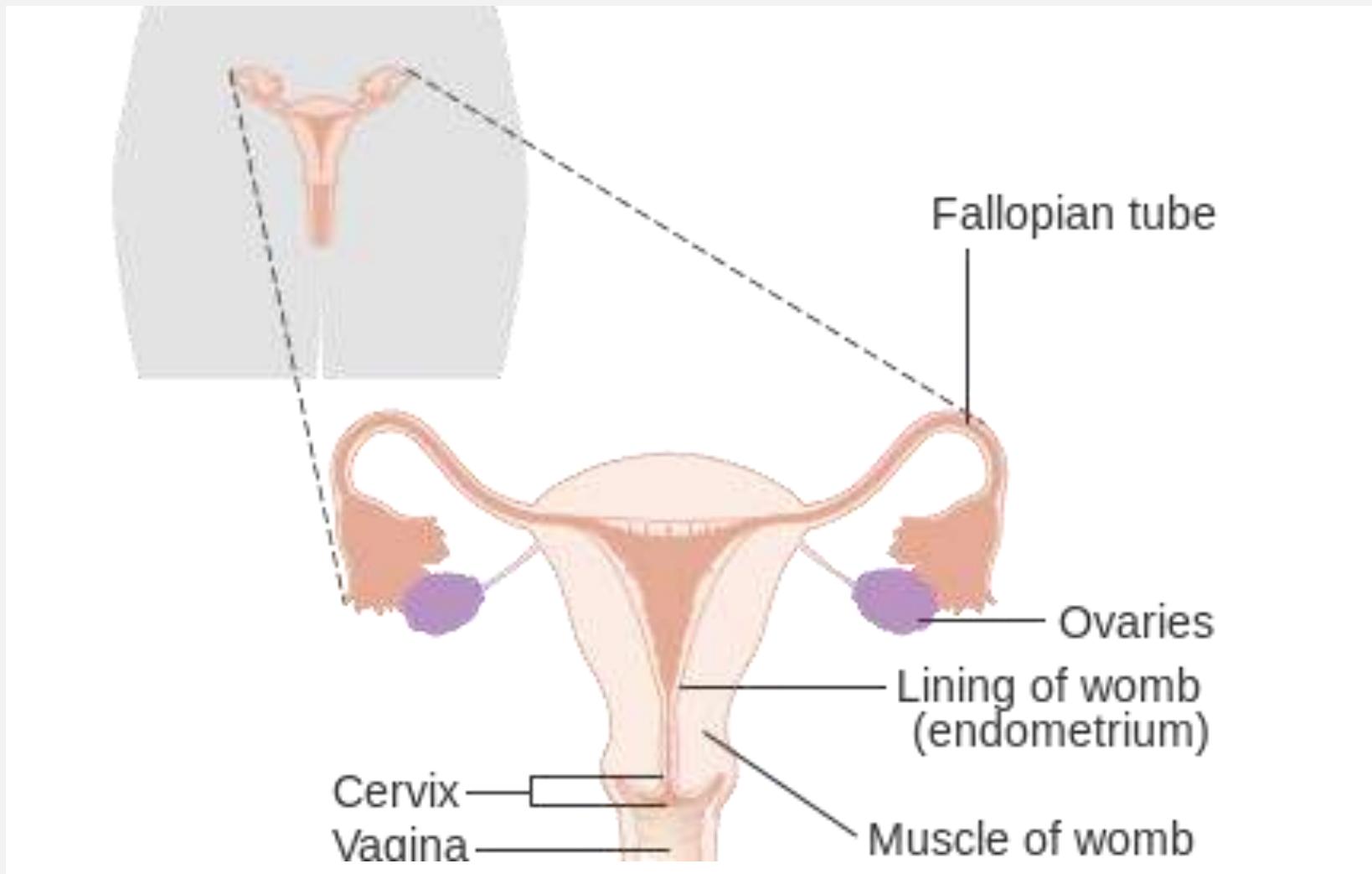
If this cancellation or suspension occurs prior to retrieval, we will issue a credit balance in accordance with services rendered during the cycle. Credit balances will be established on a case-by-case basis. We are not able to extend credit toward products or services provided by third parties (products or services provided by third parties include but not limited to medications, phlebotomy, anesthesia, genetic testing, tissue storage fees, etc.).

Section 2: The IVF Process

**Ovulation Induction.
Oocyte Retrieval.
Embryology.**



The Female Reproductive System



IVF Medications

Day 2 Start

The decision to start medication is based on Day 2-Day 3 blood tests and ultrasound results, as well as approval from the insurance carrier.

If you purchase your medications in advance, and your cycle is cancelled, you will not be able to return medications to the pharmacy.

If stored properly, medications can usually be stored safely for one year.

Insurance Coverage

If you do not have insurance coverage, please notify an IVF nurse of your pharmacy of choice and when you would like the medication order to be placed.

If you have insurance coverage, we must abide by the carrier's guidelines as to drug selection, dosage, and location of pharmacy. Please arrange for pick-up/delivery of your medications ahead of time, especially if your carrier requires a mail-order pharmacy.

Medication Types

Gonadotropins
(FSH, HMG)

Antibiotics
(for Male Partner if Appropriate)

GnRH Antagonists

GnRH Agonist

Ovulation Trigger Shot



Medication Pricing

Scan here to access discounted medication pricing available for NYULFC patients at **Apthorp, Metro Drugs, and Schrafft's** specialty pharmacies:



Please review the specialty pharmacy sheet, located in your NYULFC patient information packet.

Please be sure to review your medications and store them appropriately.

Gonadotropins (FSH, HMG)

Purpose:

Gonadotropins are used to stimulate the ovaries to mature multiple follicles simultaneously.

Types:

- FSH – Gonal F® or Follistim® administered via the “Pen”
- HMG – Menopur® administered via subcutaneous injection with the short needle

Possible Side Effects:

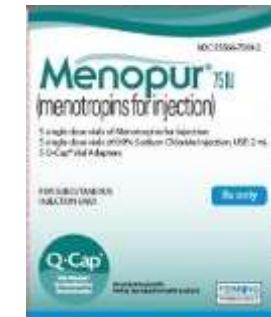
Breast tenderness, rash or swelling at injection site, mood swings, depression, abdominal bloating or discomfort, hyperstimulation syndrome (<1%)

Special Instructions:

Once you begin ovarian stimulation using gonadotropins, limit exercise to walking. Stay well hydrated, and eat plenty of protein.

Please Note:

Gonal F® and Follistim® are the same medication (different manufacturers). You may be required by your insurance carrier to use a specific medication. If NYULFC does not participate with your insurance, you may wish to shop around for either medication from several pharmacies to find the lowest price. It is best to do this in advance, then tell us where you would like us to send your prescription.



GnRH Antagonists

Purpose:

GnRH Antagonists are used to suppress the release of luteinizing hormone (LH), which helps to prevent premature ovulation.



Types: Cetrotide® or Ganirelix Acetate®

Administration:
Subcutaneous injection

Cycle Day Started:

Typically, patients begin GnRH Antagonists between Cycle Day 7-9, depending on the individual's response to gonadotropin injections. Once begun, this medication is continued up to and including the day of the trigger shot.

Possible Side Effects: (Incidence <5%)

Abdominal bloating, bruising or reaction at injection site, headache, nausea, vaginal bleeding.

Please Note:

Please notify nurse if you have a latex allergy.

GnRH Agonist

Purpose:

The GnRH Agonist is used to suppress the natural hormone cycle and to prevent premature ovulation.

Types: Lupron®
(Leuprolide Acetate)

Administration:
Subcutaneous injection

**Cycle Day Started:**

Usually begun on Cycle Day 21 of the cycle prior to gonadotropin treatment, however this depends on your normal menstrual cycle length. Menses usually follow in 8-10 days post-injection.

Possible Side Effects:

Bloating, bruising at injection site, hot flashes, headache, mood swings, insomnia, vaginal dryness. Most of these effects happen only after menses has occurred.

Ovulation Trigger Shot

Purpose:

The trigger shot mimics the natural surge of lutenizing hormone (LH) in the body and matures the oocytes (eggs).

Types: Ovidrel® (Human Chorionic Gonadotropin – hCG)

Administration: 2 subcutaneous Ovidrel® injections must be taken **within 10 minutes of the scheduled time and in the exact dose instructed**. Failure to perform the trigger shot appropriately may result in the cancellation of the egg retrieval. (**PLEASE – SET YOUR ALARM CLOCK!**)



Possible Side Effects:

Headache, bloating, irritability, pain at the injection site, ovarian hyperstimulation syndrome.

Please Note:

Ovidrel® is a controlled substance in New York State and only certain pharmacies will dispense the drug. Please check to confirm if your pharmacy can accept an electronic prescription for Ovidrel®/hCG.

Alternate Ovulation Trigger

Purpose:

Your trigger medication will be decided based upon your response to the stimulation medications. While most cycles are triggered using Ovidrel®, if your physician deems it appropriate, you may receive instructions for Lupron® (Leuprolide Acetate) or Lupron® plus hCG/Ovidrel® instead of hCG/Ovidrel® as the trigger to cause the final maturation of the eggs.

Administration:

Subcutaneous injection. If Lupron® is used as a trigger, it will be administered as a 40 units dose and the Ovidrel® dose may be lowered.



If you do not have insurance coverage for medications (“self-pay”), we recommend waiting to buy the trigger injection until it is clear which type will be needed.

Medication Teaching Videos

Cycle Type	Brand Names	Medication Type	Purpose	Training Video
IVF, Egg Freeze	Gonal-F or Follistim	Gonadotropin (FSH)	Ovarian Stimulation	Gonal-F: https://www.youtube.com/watch?v=K_MvNC3y1t0 Follistim: https://www.youtube.com/watch?v=0iz5zu13Gnk
IVF, Egg Freeze	Menopur	Gonadotropin (HMG)	Ovarian Stimulation	Menopur: https://www.youtube.com/watch?v=HBrRpb436A0
IVF, Egg Freeze	Cetrotide or Ganirelix Acetate	GnRH Antagonist	Prevent Premature Ovulation	Cetrotide: https://www.youtube.com/watch?v=UZIMyra_WNc Ganirelix: https://www.youtube.com/watch?v=m1pDSK-1pHM
IVF, Egg Freeze	Ovidrel or Pregnyl or Lupron	Trigger Injections	Mature follicles & release eggs (TIMED CAREFULLY!)	Ovidrel: https://www.youtube.com/watch?v=mmD_Fi4LcS0 Pregnyl: https://www.youtube.com/watch?v=RtC49jsxcUc

Oocyte Retrieval

The oocyte retrieval procedure is scheduled

34-36 hours

after the ovulation trigger.

You cannot eat or drink within 6 hours of your egg retrieval.



You will be introduced to the anesthesiologist who will administer intravenous sedation. The egg retrieval procedure generally takes

5-10 minutes

and you will be sedated for the duration of the procedure.



Do not take aspirin, NSAIDs (Motrin, Aleve, Advil, Naprosyn) or any medication, herb or other substance that can interfere with platelet function during your treatment cycle. Doing so will increase your risk of having a bleeding complication from the egg retrieval.



Frozen partner or donor sperm must be in the laboratory prior to starting medication. If there is a male partner who will provide a fresh specimen, both male and female partners should **arrive 1 hour prior to the scheduled retrieval**. You will then be directed to the 6th floor where our procedure room, andrology, and embryology laboratories are located.



Oocyte Retrieval:
Complete!

Plan to rest at home for the full day of your egg retrieval.

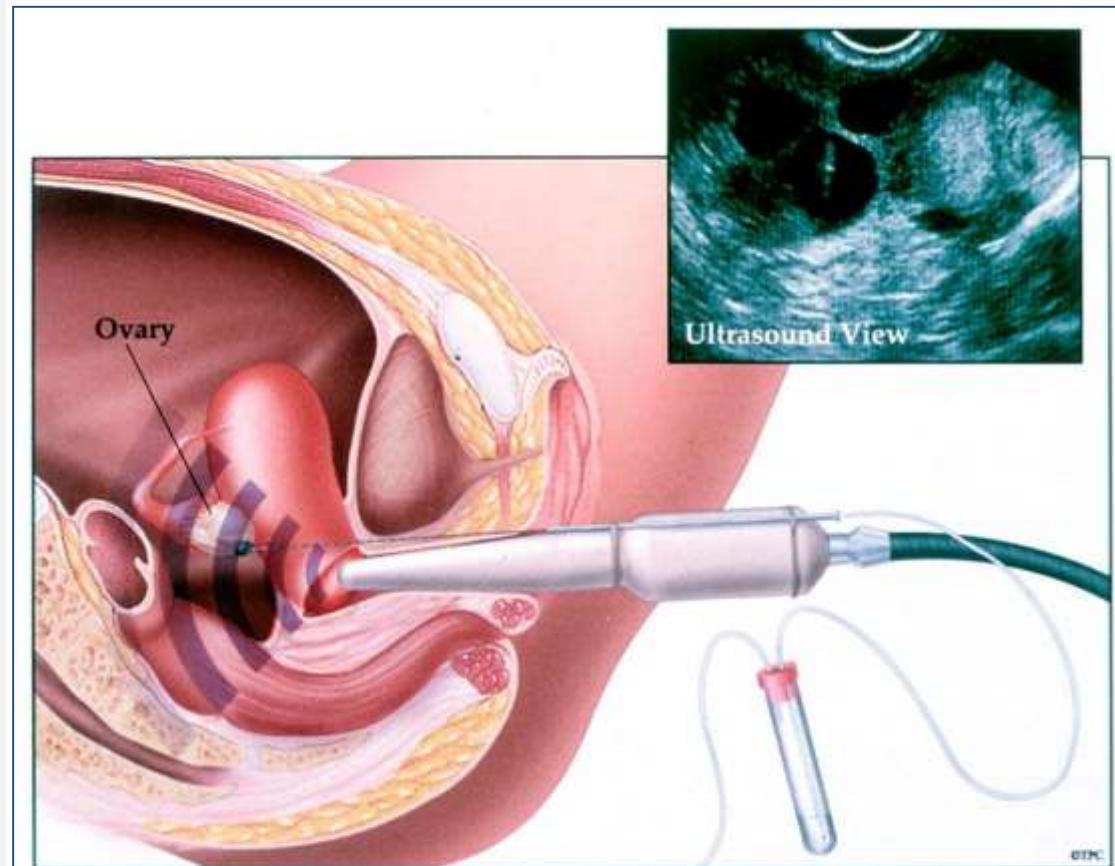


Recovery typically takes 1 hour, but can be longer. You will be evaluated for pain and given post-operative instructions. Because you will receive anesthesia, you **must be discharged to the care of an adult escort who will bring you home safely**. This is a safety measure mandated by NYU Langone Medical Center.

Oocyte Retrieval: Reminders

- Retrievals begin around 9:30AM ET each day. Retrievals are scheduled approximately every 30 minutes until all are completed.
- Your retrieval will occur 34-36 hours after your trigger injection. Your trigger injection must be taken within 10 minutes of the scheduled time and in the exact dose instructed. **Please set your alarm clock for your trigger injection!**
- When you wake up on the morning of your scheduled egg retrieval, please remember that you cannot eat or drink within 6 hours of your egg retrieval. If directed, take your medications with a sip of water.
- Small lockers are available onsite, but please do not bring any valuables. Come as you are! Please do not wear jewelry or make-up to your egg retrieval procedure.
- When you arrive at 660 First Avenue, you will check in on the 5th floor in our main reception area. You will then be directed to the 6th floor where our procedure room is located. Our nursing team will perform an intake evaluation and prepare you for the egg retrieval. You will be introduced to the anesthesiologist who will administer intravenous sedation. The egg retrieval procedure typically takes 5-10 minutes. You will be sedated for the duration of the procedure. Recovery generally takes 1 hour, but can be longer. During the recovery period, you will be evaluated for pain and given post-operative instructions.
- Because you will receive anesthesia, you must be discharged to the care of a responsible adult who will bring you home safely. This is a safety measure mandated by NYU Langone Medical Center and AAAASF. **No Escort. No Retrieval.**

Oocyte Retrieval



Using ultrasound to view the ovary, the physician inserts the needle through the wall of the vagina into the ovary and removes the egg for use in IVF

Illustration Courtesy of Organon

Embryology & Andrology

At retrieval, eggs are evaluated by an embryologist.

In routine cases, sperm are added to the dish containing eggs and a special medium. In nonroutine cases, ICSI is performed.

The dish is placed in an incubator where normal fertilization may occur. Any resulting embryos are cultured further and evaluated.

If the patient has chosen to perform genetic testing (PGT-A, PGT-M), embryo biopsies are performed. If the patient has multiple embryos at this stage, the patient has the option to cryopreserve (freeze) their good-quality embryos. Please note that embryo cryopreservation requires a separate consent form.

If a patient chooses to cryopreserve eggs, embryos, or sperm, all frozen tissue is stored onsite at NYU Langone Fertility Center. All NYULFC patients will receive an account with our tissue management partner, Embryo Options. Patients may log in to the Embryo Options portal at any time to manage their cryostored tissue (online education, bill-pay, disposition management, and more).



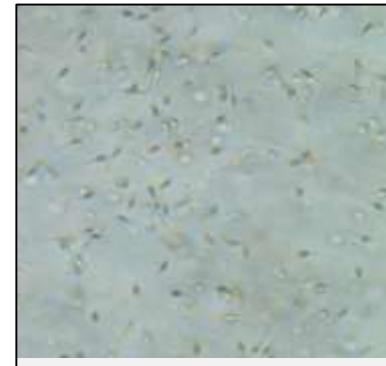
Embryo Development



Egg with surrounding cells immediately after retrieval



Mature egg with surrounding cells removed



Semen are processed to concentrate motile cells



Embryo that has reached the blastocyst stage



Day 1
Fertilisation



Day 2
4 cell



Day 3
8 cell



Day 4
Morula



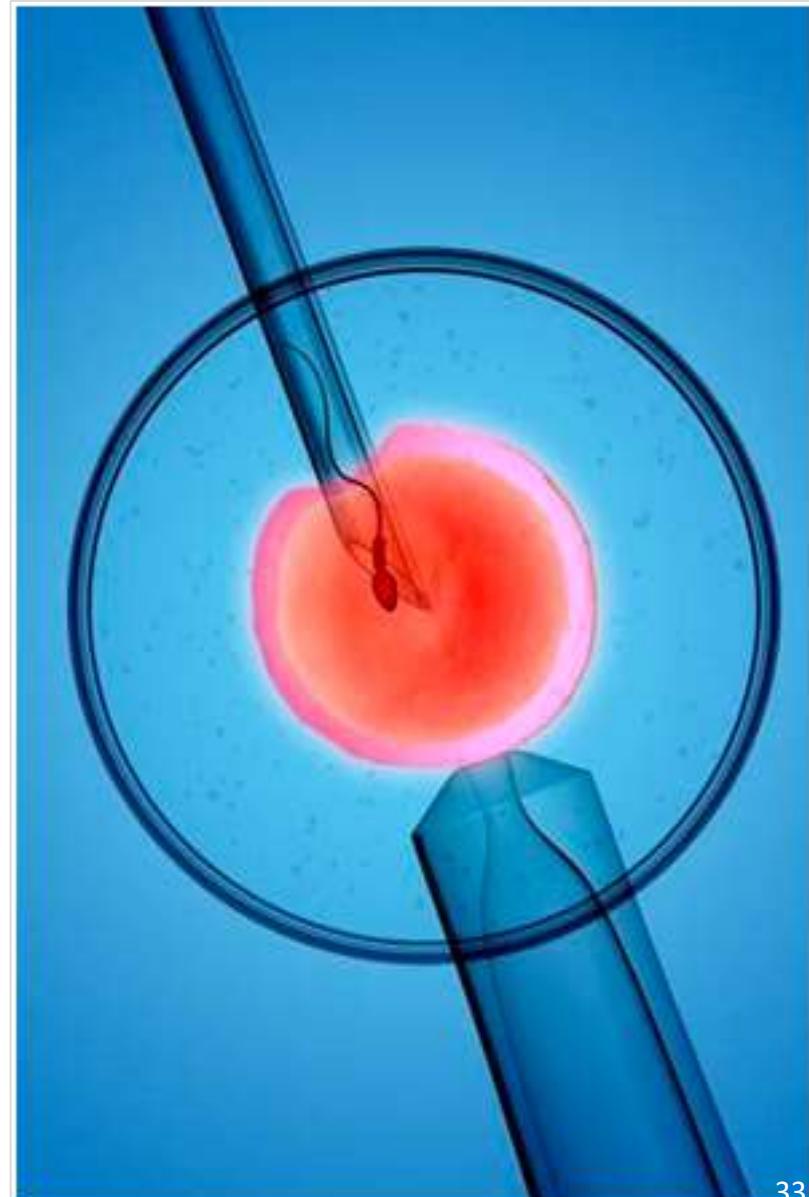
Day 5
Blastocyst

Intracytoplasmic Sperm Injection (“ICSI”)

Intracytoplasmic Sperm Injection is when a single sperm is injected into the egg to assist fertilization.

ICSI is indicated for certain types of genetic tests, and/or if the male partner:

- Has low sperm count and/or motility when semen specimen is analyzed
- Has a clinical history of poor fertilization efficiency
- Uses any of the following:
 - Calcium channel blockers (*Procardia*®, *Norvasc*®, *Adalat*®, *Calan*®, *Verelan*®, *Tiazac*®, *Dilacor*®, *Sular*®, *Caduet*®)
 - Testosterone or other bodybuilding enhancers
 - Any other medications known to effect sperm number or function
- Has an acute drop in motility following sperm preparation on the day of egg retrieval



Pre-Implantation Genetic Testing (PGT)

PGT refers to genetic testing performed on an embryo in the early stages of embryonic development.

PGT can be used to identify embryos affected by **chromosomal abnormalities** that could increase the chance of miscarriage or increase the chance of a pregnancy affected by chromosomal conditions (ie. cystic fibrosis, Tay-Sachs disease, hemophilia).

Preimplantation genetic testing and the subsequent transfer of a single, euploid ("normal") embryo increases the chance of successful implantation and, ultimately, increases the chance of a successful pregnancy.

PGT requires the removal of a small number of cells from the developing embryo in a process called an "**embryo biopsy**." The biopsy is performed by skilled embryologists at NYULFC. The embryos are then frozen and stored onsite at NYULFC, while the sample of cells removed ("embryo culture") is sent to a genetic testing lab, to perform PGT analysis.

PGT-A (Aneuploidy)

PGT-A is the most common type of PGT, available to all patients creating embryos. PGT-A tests for chromosomal abnormalities that occur spontaneously (e.g. are not inherited in families).

Chromosomal abnormalities are very common (often present in >50% of embryos) and usually result in failed implantation and miscarriage.

PGT-A does not test for inherited genetic diseases (this is why NYULFC recommends carrier screening), or birth defects, autism, or developmental issues.

PGT-M (Monogenic)

PGT-M tests for inherited genetic conditions if there is a known high risk of having an affected pregnancy.

PGT-M always requires prior review by a specialized PGT lab and development of a custom test before cycle start (requires minimum 3-4 months).

PGT-SR (Structural Abnormality)

PGT-SR tests for inherited chromosomal abnormalities (e.g. balanced translocations).

PGT-SR always requires prior review by a specialized PGT lab. Some cases also require a custom test to be developed prior to cycle start.

FET Cycle Requirement

PGT requires that embryos are cryopreserved (frozen) while the embryo biopsy is sent to the genetics lab for analysis. Once results are received, patients can schedule an embryo transfer occurring in a separate cycle (a frozen embryo transfer, or "FET" cycle).

Consent: # Embryos for Biopsy

NYULFC strongly recommends that all embryos available are biopsied for PGT. As each embryo incurs both a biopsy fee (payable to NYULFC) and a testing fee (payable to CooperGenomics), patients may choose to limit the number of embryos biopsied/tested.

Please be aware: You will be asked to sign a consent indicating the number of embryos for biopsy (all available or a maximum number).

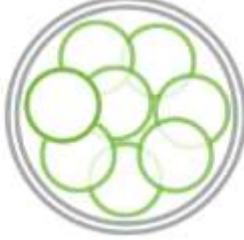
CooperGenomics

NYUFC uses the laboratory CooperGenomics as our PGT-A provider. If you are considering PGT-A, a phone consultation with a CooperGenomics Genetic Counselor is required prior to cycle start.

Please be aware: PGT incurs additional lab fees that are separate from NYULFC fees. PGT fees are paid directly to the PGT lab.

PGT-A: Possible Results

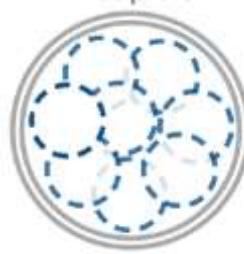
Euploid (“Normal”)



A euploid or “normal” result means that 23 pairs of chromosomes were detected in the embryo biopsy.

These embryos have the highest chance of resulting in a live birth and the lowest chance of miscarriage.

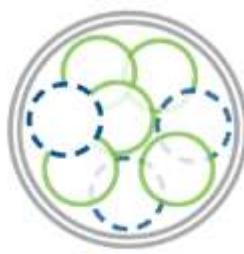
Aneuploid (“Abnormal”)



A whole chromosome aneuploid or “abnormal” result means that at least one extra or missing chromosome was detected in the embryo biopsy, and is believed to be present in all tested cells.

NYULFC does not recommend transferring whole chromosome aneuploid embryos, as they very rarely result in healthy pregnancies.

Mosaic/Segmental Aneuploid



A “mosaic” result means there may be extra or missing chromosomes in some cells in the embryo biopsy. A “segmental aneuploid” result means there may be extra or missing pieces of chromosomes in the embryo biopsy. Embryos with these results sometimes result in healthy live births, but do so at a lower rate than euploid embryos, and may have additional risks.

If you are considering transfer of a mosaic or segmental aneuploid embryo, NYULFC requires a consultation with our genetic counselor prior to initiating your FET cycle.

Inconclusive (“No Result”)



An “inconclusive” result means the genetic testing laboratory was unable to obtain a clear result from the embryo biopsy.

This occurs in approximately 2% of embryos, and does not necessarily indicate a problem with the embryo – it is simply a known limitation of testing a small amount of genetic material.

An embryo with inconclusive results may be able to undergo re-biopsy, in an effort to obtain a result.

Storage of Frozen Embryos After PGT

NYULFC will continue to store all frozen embryos, regardless of PGT results, until the patient submits a completed consent for embryo disposition.

The first year of storage is included in standard cycle fees. Any embryos stored after the first year will incur annual storage fees for which the patient is responsible.

If a cycle does not produce any embryos that may be transferred based on PGT results (see table below), we recommend signing a disposition consent as soon as possible to avoid incurring future storage charges.

PGT Result	Maintained in Cryostorage until Disposition Consent Received	Option to Transfer for attempted pregnancy? (FET Cycle)	Option to re-biopsy embryo for re-testing? Additional fees apply.
Euploid (Normal)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Whole Aneuploidy (Abnormal)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mosaic or Segmental Aneuploid	<input checked="" type="checkbox"/>	<i>Genetic Counseling Required</i>	<input type="checkbox"/>
Undiagnosed (Inconclusive)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Cryostorage with Embryo Options

All frozen tissue is stored onsite at NYULFC.

All NYULFC patients will receive an account with our tissue management partner, Embryo Options.

Patients may log in to the Embryo Options portal at any time to manage their cryostored tissue (disposition consents, online education, bill pay, etc).

Pre-enroll for your Embryo Options account at <https://eocryo.com/nyu-e9c5b> or by scanning this QR code:



Consent Forms Required for IVF

NYULFC partners with EngagedMD to deliver consent forms and video education modules via email for signature using DocuSign. **You will receive your consent forms via email, and you will be required to verify your identity when you sign.** You will be asked to scan your driver's license or passport using your phone. **All consents must be complete prior to cycle start.**



IVF Consent

PGT Consent (If Applicable) & Number of Embryos to Biopsy for PGT Consent

Embryo Cryopreservation Consent

When completing this consent, you and your partner (if applicable), should discuss your options and come to an agreement about how to manage stored embryos.

Embryo Transfer Consent (Fresh or Frozen)

Release for Frozen Sperm

A release is required before a frozen sperm specimen can be thawed – this is required for either donor sperm or sperm from a male partner. If the sperm is from a male partner, the male must consent to its thaw and usage before thaw can occur.

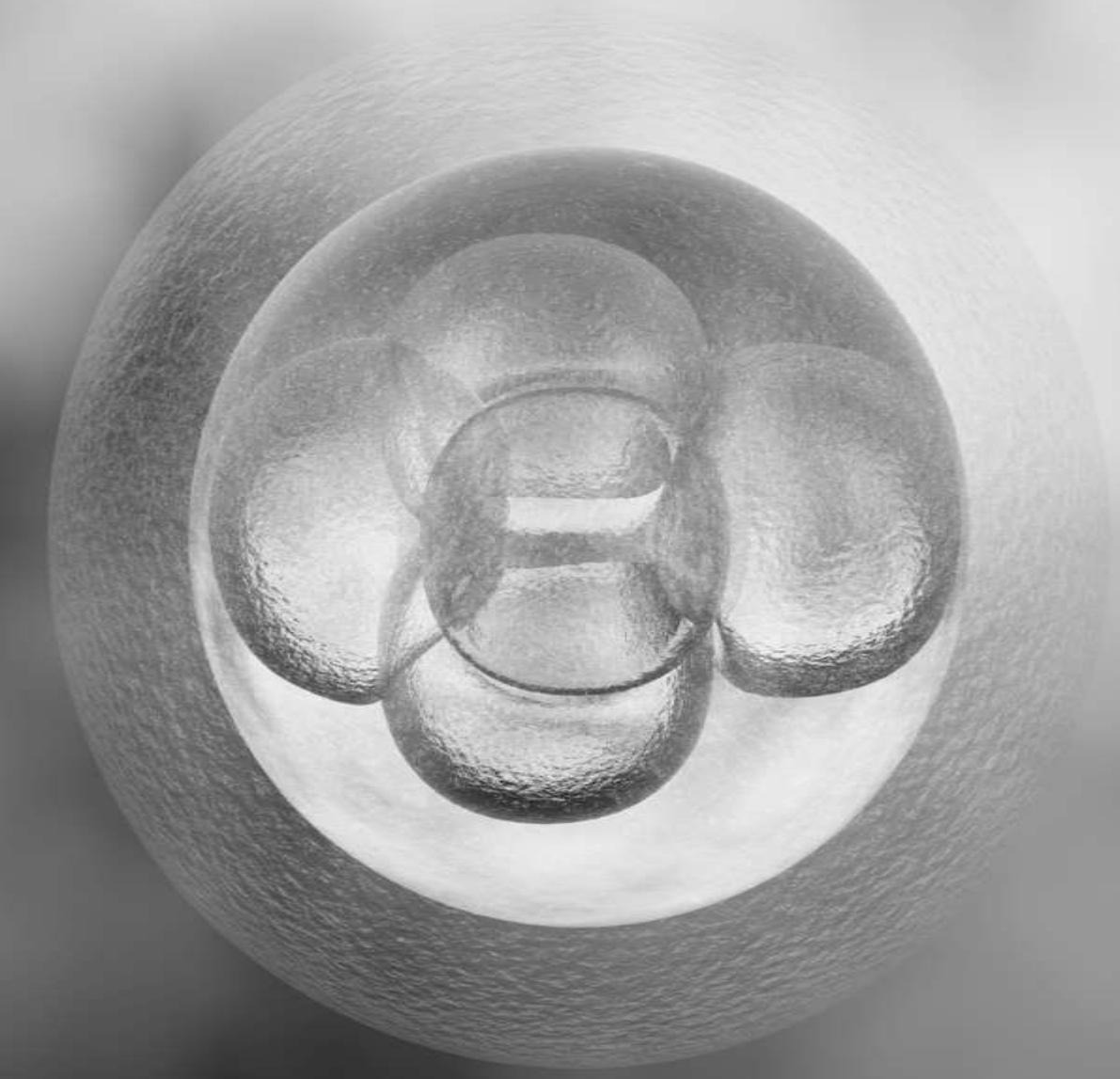
Donor Sperm

An additional consent is required for the use of donor sperm, if applicable.

Embryo Disposal

Section 3: Embryo Transfer

**Fresh ET.
Frozen ET.
Pregnancy Monitoring.**



Progesterone

Purpose:

Progesterone is used to enhance the uterine lining's ability to sustain embryo implantation and pregnancy. Progesterone is required to perform either a fresh or a frozen embryo transfer cycle.

Administration:

Intramuscular injections or vaginal suppositories.



Do not stop taking progesterone unless instructed to do so by a staff member at NYULFC.

Possible Side Effects:

Cramping, headache, nausea, breast tenderness, mood swings, or vaginal irritation.

Please Note:

Please notify your physician and nurse if you have any nut allergies.

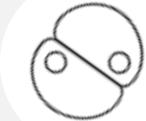
Fresh or Frozen Embryo Transfers



The selected embryo is transferred directly into the uterus during a **5-15 minute procedure**; sedation is not usually required and there is no recovery period.

You will be allowed to get up and depart immediately after the embryo transfer procedure.

Fresh Embryo Transfer



If you are performing a fresh embryo transfer, your fresh embryo transfer will be scheduled for **5 days** after the oocyte retrieval.

The embryo selected for transfer is based on the embryo grading system used by the NYULFC embryology laboratory.



Frozen Embryo Transfer (“FET”)



During your IVF cycle, you will have the option to cryopreserve ("freeze") any embryos you may create.

You may wish to freeze embryos to **enable biopsy for PGT**, or you may simply need to freeze additional embryos created during your cycle for future embryo transfer during a subsequent cycle.

Day 2 FET Start

When you return for your FET, you will need to discuss your treatment plan with your physician prior to initiating the cycle. Your physician will provide guidance on your medication protocol and care plan, and will enter a **“Cycle Reservation” for the (estimated) Day-2 of your next menses** to begin your FET.

Insurance authorization, consent forms, and prerequisite blood tests may also be required. At your Day-2 appointment, we will perform bloodwork and a sonogram. Following your visit, a nurse will notify you if you are cleared to start.

FET Cycles at NYULFC

Patients at NYULFC undergo **“Hormone-Replaced”** or **“Programmed” FET cycles**. This enables predictability and scheduling safely for a successful cycle. **Prior to your FET, you will need prescriptions for Estrace and Progesterone supplementation**. After you are cleared to start, you will be instructed on how to begin Estrace.

You will be instructed to visit NYULFC around day 12 for another blood test and a sonogram. A nurse will call you with instructions regarding the start date for Progesterone, instructions for the embryo transfer, and the date of your scheduled FET.

Embryo Thaw & Transfer

On the date of your FET, the embryo selected for thaw and transfer will be based on the following criteria in this order:

1. Results of PGT testing (if applicable)
2. Best-quality embryo as graded by the laboratory
(*Information about embryo grading is provided on a handout in your orientation materials*)

Fresh vs. Frozen Embryo Transfer

Day 0

Egg Retrieval.
Sperm Preparation.
Insemination (or ICSI)

Day 1

Fertilization Check.
Post-Op Portal Message
with Fertilization Results.

Fresh Embryo Transfer Cycle**Day 1**

Follow instructions for
Progesterone
administration

Day 5

Best quality embryo
selected for transfer;
embryo transfer occurs

**Day 8**

Portal Message from
Genetics to inform you
how many additional
embryos (if any) were
frozen

Day 14

Pregnancy test to
determine success
(9-days post transfer)

**PGT & Frozen Embryo Transfer Cycle (FET)****Day 3**

Embryologist will
create opening in
outer shell
(zona ablation)

Days 5-7

Biopsy is
performed on all
suitable blastocysts,
which are then
frozen pending
genetic results

**Day 8**

Portal Message
from nursing to
inform you how
many (if any)
embryos were
biopsied and frozen.

Days 15-18

Call from nursing
within 7-10 days
after biopsy to
inform you of PGT-A
results (2-3 weeks
for PGT-M/SR)

**Date TBD**

You can
schedule your
FET cycle after
results are received;
often at Day 2 of
your next menses

Single Euploid Embryo Transfer (SEET)

NYULFC strongly encourages the transfer of a **single, chromosomally normal (euploid)** embryo to increase the chance of a healthy pregnancy and live birth.



Risks of Multiple Gestation Pregnancies

The risk of perinatal death in twins is **4 times** higher than for singletons.
The risk of perinatal death in triplets is **10 times** higher than for singletons.

Other risks associated with twin pregnancies include

- higher likelihood to develop pre-eclampsia
- higher likelihood to be hospitalized during pregnancy
- higher likelihood to have preterm labor (average gestation for twins: 35 weeks)
- more likely to require a Caesarian section
- stress on parents and siblings; divorce rate is higher in parents of twins
- twins have a 7 times higher rate of Cerebral Palsy
- rate of learning disability is increased for multiples, even near-term
- long-term costs associated with minor and major handicaps

Luteal Monitoring (Post-Transfer)

Progesterone Blood Test

You will have a progesterone blood test on the day of your embryo transfer.

Pregnancy Blood Test

9 days after the embryo transfer, you will visit NYULFC for a pregnancy blood test (mandatory).

If positive, you will be asked to return within 1-week for a repeat blood test.

Pregnancy Ultrasound

3 weeks after the embryo transfer, assuming the pregnancy test is positive, you will return to NYULFC for a pregnancy ultrasound.



Transfer to OB

After a fetal heartbeat is documented during an ultrasound, you may **transfer your care to the obstetrician** of your choice.

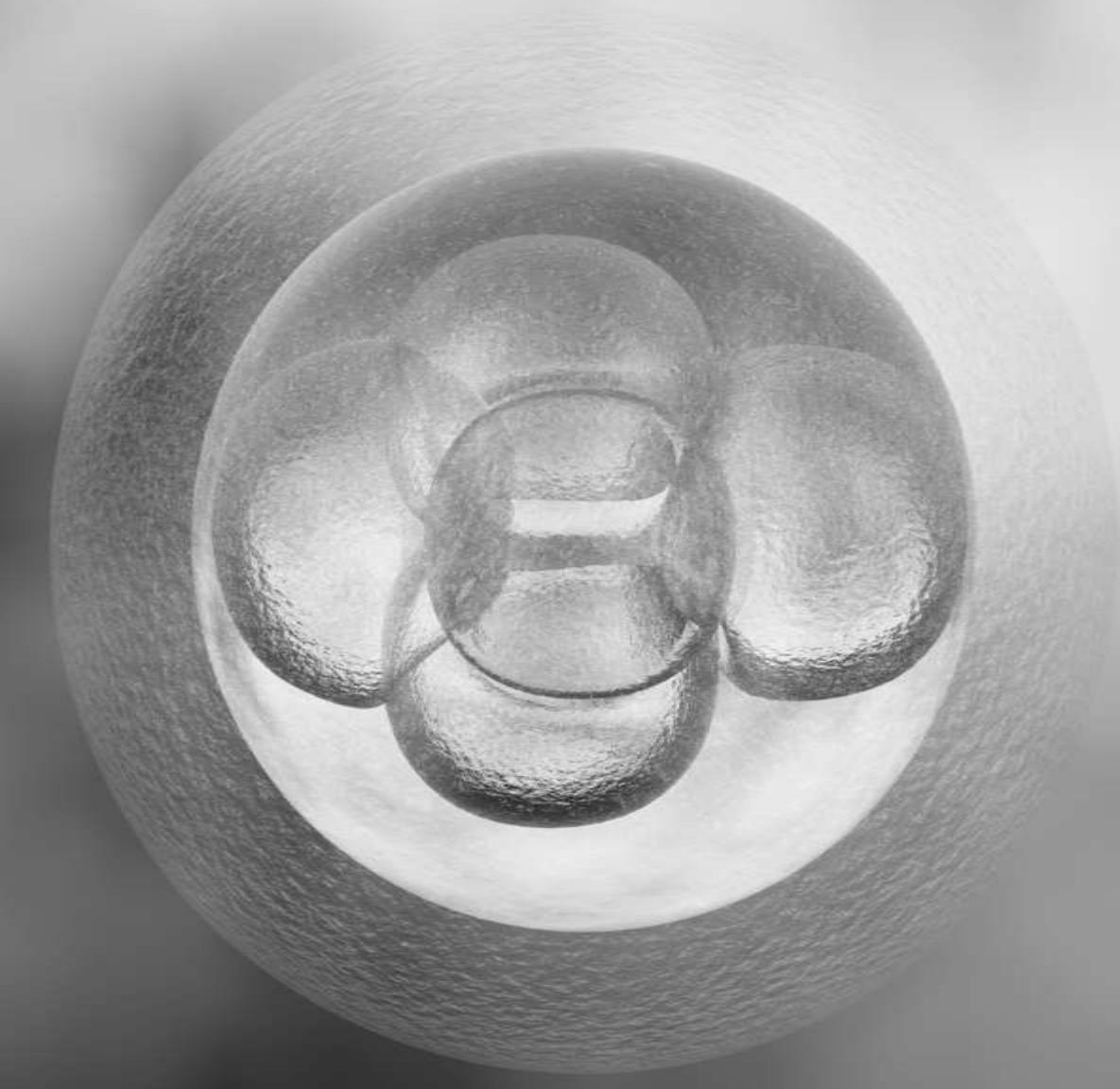


Medication Information & Resources

Cycle Type	Brand Names	Medication Type	Purpose	Training Video
FET	Estrace	Estrace is used to build the uterine lining in preparation for embryo transfer. You will start Estrace tablets on Day 2 when instructed to do so by a nurse. You will continue this medication through the 10th week of pregnancy.	Partner receiving FET will be prescribed Estrace tablets on Day 2; continue taking Estrace through 10 th week of pregnancy; Estrace is taken orally	
FET	Crinone suppository or Progesterone in Sesame Oil or in Olive Oil	Progesterone is used to help support pregnancy. Progesterone is given in the form of a vaginal suppository or intramuscular injection to be started upon instruction when your embryo transfer has been scheduled by the embryology lab. You will continue this medication through the 10th week of pregnancy.	Crinone Suppository: https://www.mdrusa.com/wp-content/uploads/Crinone-Instructions-1.pdf Progesterone in Oil: https://www.youtube.com/watch?v=jr1Y5o7C6a4	

Section 4: Wellness

Wellness & Support for NYULFC Patients



Mind & Body Support

Acupuncture Services



Acupuncture services are provided by Lara Rosenthal, L.Ac.

Acupuncture is offered onsite at NYULFC 4 days per week.*

Acupuncture can be safely used prior to and concurrently with fertility medications and procedures.

If you are interested in acupuncture for fertility, please call 212-807-6769.

Mind-Body Support Group



NYULFC patients have access to a Mind-Body support group provided by Helen Adrienne, LCSW, BCD.

Mind-Body support is offered as a series of individual classes, a one-day group program, or on an individual consultation basis.

The main goal of Mind-Body support is to help patients realize that while they cannot control infertility, they can control how they navigate it.

If you are interested in Mind-Body support, please call 212-758-0125.

Yoga for Fertility



Yoga for Fertility is provided by Barrie Raffel.

Yoga for Fertility is safe to practice at any time during your fertility treatment cycle.

If you are interested in Yoga for Fertility, please contact Barrie at barrieraffel@gmail.com

Nutrition for Fertility

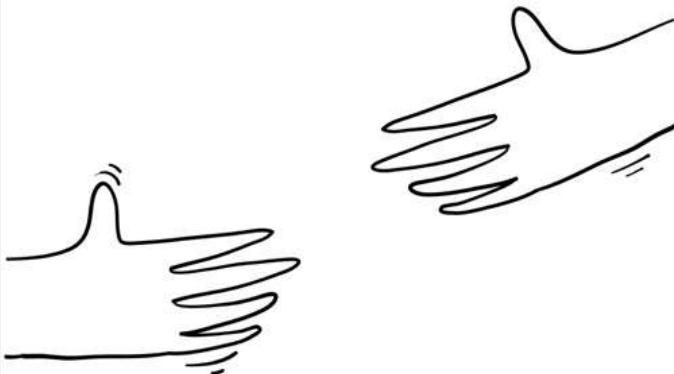


Nutrition for Fertility is provided by dietitians at Rooted Wellness.

Nutrition for Fertility can be started at any time during your fertility treatment cycle.

If you are interested in Nutrition for Fertility, please email sarah@rootedwellness.com (Sarah Rueven) or claire@rootedwellness.com (Claire Virga).

Psychological Support Services



NYULFC patients have access to onsite and offsite psychologists, all of whom have decades of experience helping couples to navigate the stressors created throughout the fertility treatment journey.

Consultations, treatment, and support sessions are available for couples and/or individuals.

Consultations are mandatory for all patients using donor gametes.

If you are interested in psychological support, please call 212-263-0054 for information or to book your appointment.

Information & Support

We recognize that you have a choice in care providers, and we are committed to providing compassionate, individualized, and cost-effective service.

We're happy to go at your pace and answer any questions you may have. Ask questions during your visits, or call us at **212-263-8990**. We're here for you.

Information resources are available online at

- ASRM.org
- Resolve.org
- SART.org
- cdc.gov/art

Visit our website at www.FertilityNY.com for more information, including a **Patient Resources section** with patient forms, orientation slides, and Injection Training videos.

Issues to Consider Before Beginning IVF

Potential Health Risks & Side Effects of IVF

- Severe ovarian hyperstimulation (OHSS) which can result in hospitalization.
 - Depending on a woman's sensitivity to fertility medications, moderate to severe hyperstimulation can occur, and may require frequent monitoring or changes to the cycle, including cancellation or postponement of the embryo transfer, or hospitalization.
 - Please call our office immediately if you feel very bloated or have a rapid weight gain. Consult the OHSS information sheet in your patient information packet for details.
- Adverse reaction to medications
 - Anesthesia medication may cause constipation. Colace® is available over-the-counter for this side effect.
 - Allergic reaction to anesthesia or fertility medications.

Cryopreservation of Additional Embryos

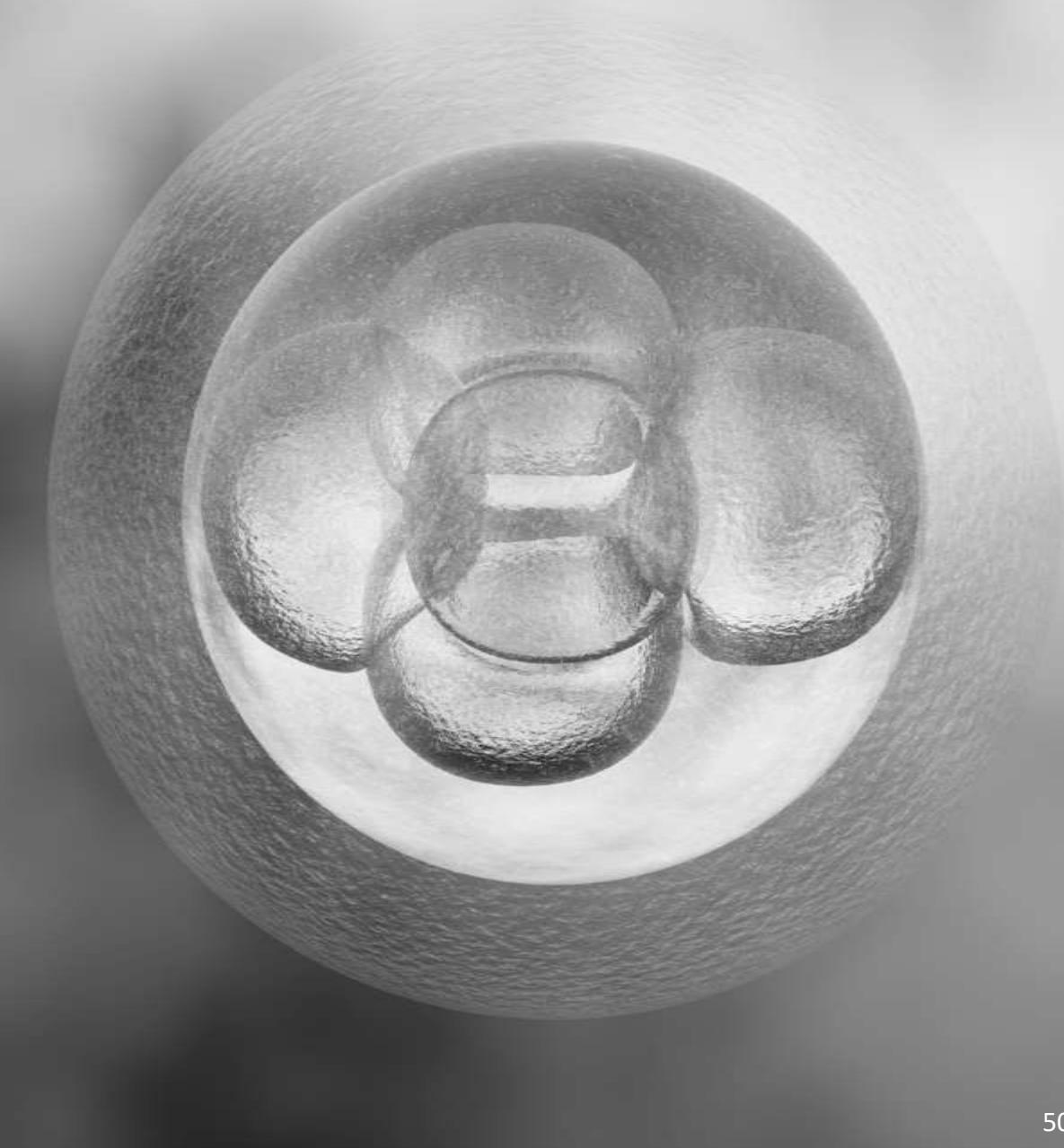
- The decision to cryopreserve embryos is an important one that should be considered carefully between patient and partner (if applicable) before creating embryos.
 - Embryo custody in the event of death or divorce
 - Embryo disposition: Discard? Donate to Research?

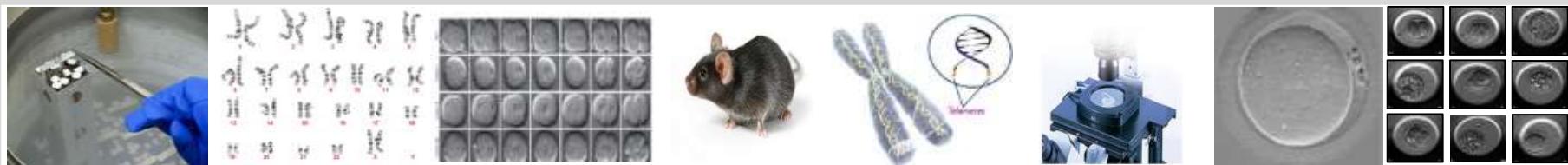
Number of Embryos to Transfer

- Multiple pregnancy and associated risks; elective reduction of multi-fetal pregnancy; pre-term labor and Cesarean delivery; prematurity.

Section 5: Research

Research Studies & Participation Options





Research Studies at NYULFC

NYULFC is dedicated to the mission of advancing science and improving healthcare through scientific discovery.

As a leading center in academic research, our faculty and staff are actively engaged in multiple research studies at any time which we hope will advance and improve infertility benchmarks and fertility treatment options.

The purpose of our sample collection and repository is to enable the research use of superfluous biospecimens, which are not needed for diagnostic or clinical use, and which would otherwise be discarded.

Participation in research studies is voluntary, which means it is your choice if you would like to participate or not. Your decision as to whether or not to participate will not affect the care you receive during your treatment cycle.

Providing consent for research does not impact your medical treatment in any way. Research consents must be witnessed by an NYU Langone Fertility staff member.

Our research studies follow a transparent process of independent Institutional Review Board (IRB) evaluation and careful informed consent. The IRB reviews all proposed studies and ensure that they are conducted in a manner which safeguards and promotes the health and welfare of subjects.



Research Studies at NYULFC

The goal of our research is to optimize fertilization, embryo development and culture, in vitro maturation, cryopreservation, understanding egg and embryo viability as well as other clinical indications of infertility.

Our research studies use biological material (procedural by-products, non-viable specimens or materials deemed non-useable to create live-born pregnancies) from your cycle that would normally be discarded during the routine course of your cycle.

Discarded biological materials may include collection of minimal residual sample from sperm preparations, granulosa cells, cumulus cells, fluids from the ovarian follicles that are harvested during oocyte retrieval, immature oocytes, abnormally fertilized oocytes or embryos of such poor quality that are not suitable for transfer.

Tissue donated to research is never transferred to human subjects. NYULFC will only collect, use, and store de-identified specimens that are donated for research. Donated research specimens – including DNA material – will not be used to identify patients and will be destroyed once research has been done.

Research conducted using these otherwise discarded biological materials will help us learn more about factors of fertility and infertility in order to better understand various reproductive disorders.

If you have questions about the research or your participation,
please e-mail the senior clinical research coordinator at
Fang.Wang@nyulangone.org

Questions?



E: Haley.Penny@nyulangone.org



T: 212-263-8990



F: 212-263-7853

