

# Introduction to CRM

Ronald O. Perelman and Claudia Cohen  
Center for Reproductive Medicine - CRM



# CRM Locations

## Upper East Side (Main Office)

1305 York Avenue, 6<sup>th</sup> Floor  
New York, NY 10021

*\*open 7 days a week including holidays – 630am - 10am\**

*\*all starts will have your first visit here*

## Upper East Side (Satellite Office)

215 East 68<sup>th</sup> Street  
New York, NY 10065

*(no monitoring at this site – satellite for Dr. Melnick)*

## Tribeca

255 Greenwich Street, Suite 540  
New York, NY 10007

## Brooklyn

186 Joralemon Street, 12<sup>th</sup> floor  
Brooklyn, NY 11201

## Mount Kisco, Westchester County

657 Main Street  
Mount Kisco, NY 10549

## Garden City, Long Island

1300 Franklin Avenue  
Garden City, NY 11530

## Southampton, Long Island

2 Montauk Hwy  
Southampton, NY 11968

*\*open 7 days a week including holidays*

*Monitoring hours for each location is available on the CRM website [www.ivf.org](http://www.ivf.org) and included in the orientation packet  
Monitoring is available by appointment only at all locations. Please reach out to your doctor's office when scheduling appointments*



# The CRM Clinical Team

## 15 Attending Physicians

Each manage independent practices and office hours

Contribute to monitoring sessions at all sites

Rotate coverage in the IVF operating room

## Fellowship Program for REI

3 year fellowship program that follows completed Obstetrical & Gynecology Residency

Support the physician team with monitoring and office hours

## Nursing Teams – (LPN's, RN's, NP's and PA's)

Work collaboratively with CRM physicians

Work as **teams (more than 1 nurse)** to provide 7day coverage

Support patient clinical and educational needs

## Support Staff

Medical & Ultrasound Technicians



# What is In Vitro Fertilization (IVF)?

- A treatment plan that includes the administration of fertility medications (gonadotropins) to stimulate the development of multiple eggs (follicles) in the ovaries
- Using both bloodwork and ultrasound, the follicles (fluid filled sac that may contain an egg) are evaluated for development and maturity
- Once the recruitment process meets criteria for retrieval, the “eggs” are surgically retrieved from the ovaries in a transvaginal procedure under ultrasound guidance in the IVF operating room
- Embryo(s) are then created in the embryology lab using the retrieved eggs and sperm
- Embryo(s) are evaluated and selected for transfer back into the uterus 3 or 5 days later



# Required Prerequisite Testing

## Patient:

Comprehensive panel of lab work including:

- Hormone evaluations
- Infectious disease screening (annual)
- Comprehensive chemistry panels
  - Evaluates general health
- Cervical cultures (annual)
- Uterine sounding (if applicable)
- HSG (Hysterosalpingogram) and/or SIS (Saline Infused Sonogram)
  - Evaluates fallopian tubes and uterus
- Genetic evaluations
- Consent forms

## Male Partner: (if applicable):

Lab work:

- Infectious disease screening (annual)
- Genetic evaluations
- Semen analysis to evaluate sperm concentration, volume, count, morphology and motility
- Consent forms



# Getting Started

Contact your primary nurse coordinator on CD 1-3 of the month prior to the planned cycle  
(day 1 defined as the 1<sup>st</sup> day of full menses)

- Some medication protocols begin in the cycle preceding start
- Nursing team will provide an *estimated* timeline
- Please note that twice a year we have lab down times (July and Dec)

**Business and personal travel plans *must* be avoided during stimulation**

On the assigned “**start day**”:

- Come to the office for baseline bloodwork and ultrasound; covid swab
- Bring in consents
- IVF nurse should have already contacted you to review:
  - medication protocol
  - medication needs
  - instructions for starting medications-DO NOT START MEDS UNTIL THE NURSE HAS GIVEN YOU INSTRUCTIONS

**Monitoring hours at Main Office location: 6:30am – 10am**  
**By appointment only for all locations**

**Satellite offices are posted on the locations slide and found on CRM website: [www.ivf.org](http://www.ivf.org)**



# Stimulation and Monitoring

## Stimulation

- Injectable medications stimulate the production of follicles in the ovary (follicle(s) are fluid filled sacs that may contain an “egg”)
- Medication instructions provided in the evening of monitoring days
- Generally 8-12 days of sub-cutaneous injections
- Recommend taking as close to same time each day (7pm -10pm)
- Refrain from high-impact exercise, aerobics, pelvic twisting
  - acupuncture permitted
- No ibuprofen (Advil or Motrin products) or aspirin (unless instructed)
  - **TYLENOL ONLY**
  - No herbs or supplements (PNV permitted)

### Common Side effects:

- Bruising or discomfort at injection sites
- Bloating and/or weight gain
- Mood swings
- Fatigue
- Headaches

## Monitoring

- Near daily monitoring for bloodwork and or ultrasound is expected
- Ultrasounds performed by a CRM physician or Ultrasound techs
- **Generally 8-12 days in total**
- Each day that monitoring is performed – nursing will call with instructions by 6:30pm
  - Please have an “identifying message” on voicemails
  - Ensure that voicemails are set-up and clear to accept to accept messages

### Recommendation:

#### Medication Log:

- Ensures supplies meets individual needs
- Refills are sent to all pharmacies upfront to avoid the need for additional medication requests



# Sperm Source Considerations

## Fresh Semen Sample:

- Produced the day of retrieval on the IVF Suite at NYP
- Second samples may be requested by lab
- Specific arrival times are provided
- Shower with an antibacterial soap morning of sample
- Childcare arrangements need to be made as both will need to be present on the day of retrieval

## Frozen Semen Sample:

### Partner:

- Cryopreserved in anticipation as back-up
- Surgically retrieved in the past

### Donor:

- Used as up-front use or back-up
- Transferred to CRM andrology lab from commercial labs
  - Shipments accepted Monday – Thursday
- **Must** be at CRM prior to starting stimulation
- Nursing team will need:
  - Name of the donor sperm bank
  - Donor ID number
  - Number of vials stored at CRM
    - Recommend 2-4 vials

## Recommendations:

- Abstinence period of 2-3 days prior to retrieval
- Instructions for semen productions provided at pre-op
- **Government issued Photo ID is required at the time of sample production**
- If semen production is a concern – notify the nursing team for planning
- It is critical to arrive at your assigned time to ensure the sample is prepared to coincide with the egg retrieval
- Additional consents are required for sperm storage at CRM, the Andrology lab will provide these forms
- Clinical consents and authorization to use frozen samples are required and will be provided





# Taking the “trigger shot”

Based on ultrasound and bloodwork evaluation, the team determines timing for the “trigger” shot.

The “trigger” is given as:

- ~ hCG - an intramuscular injection (human chorionic gonadotropin) **OR**
- ~ Lupron – a subcutaneous injection (leuprolide acetate)

**OR** a combination of both



Clear dosing instructions will be provided

Medications are ordered in advance to the pharmacy - be sure it is included in the shipment

Timing is **VERY** specific – critically important to take at the assigned time (9pm-2am)



# Morning after the “trigger shot”

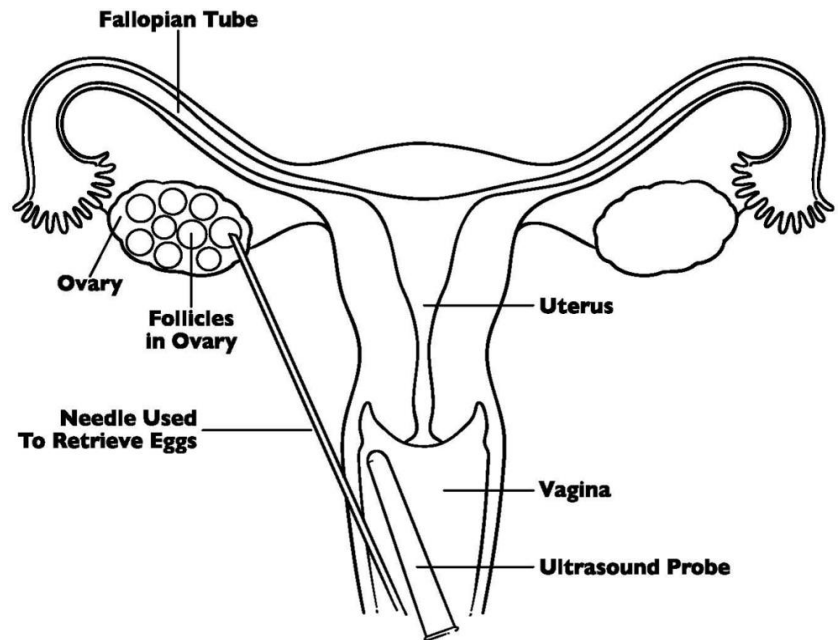
**MANDATORY PRE-OP:** 1305 York Ave. location (6<sup>th</sup> fl Conference room)– 6:30/6:45 am  
to meet with IVF Team-arrival time will be given by RN day before

- Bloodwork drawn; covid swab if it hasn't already been done a few days before trigger
- Complete required hospital paperwork-will be emailed to you the day before
- Complete NYP procedure consents for retrieval
- Obtain instructions hospital admission for the following day
- Review post-retrieval management and timing



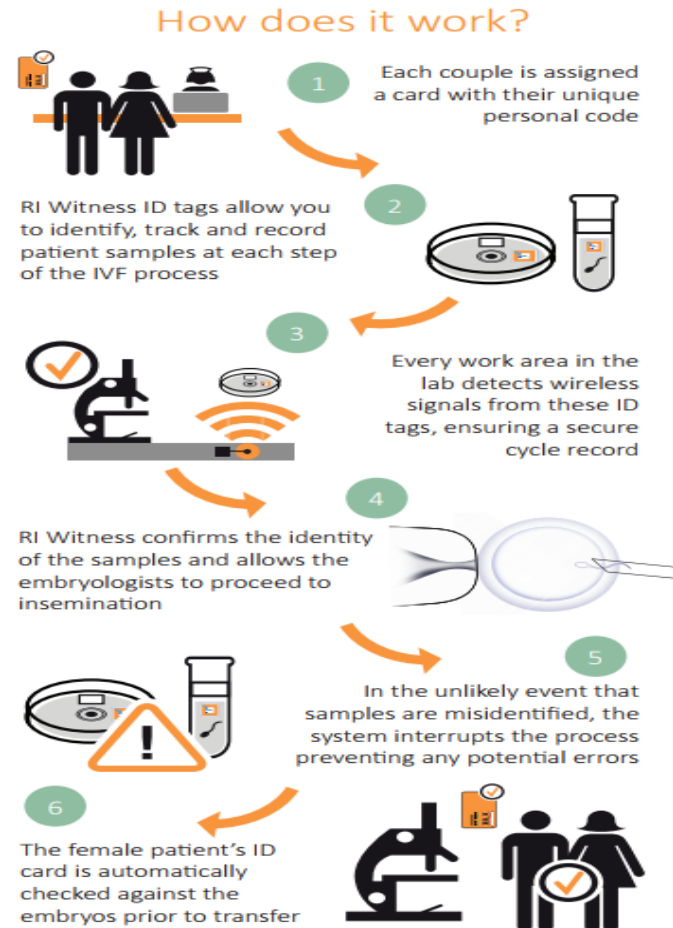
# Egg Retrieval

- Admission to New York Presbyterian – M8 IVF
- Performed trans-vaginally with ultrasound guidance
- Physicians rotate coverage daily
- IV sedation given for procedure
  - Conscious sedation - Wake up quickly
  - Given for comfort and safety
- **\*\*Notify nursing of any prior anesthesia complications\*\***
- Procedure takes approximately 15 minutes
  - Followed by transfer to recovery ~ 1 hour
- Eggs are retrieved in the OR and taken to the embryology lab for fertilization



# Electronic Witness

- To further provide our patients the highest quality care, the Center for Reproductive Medicine has implemented Electronic Witness (EW) as part of their IVF Lab procedures.
- EW offers patients added security to their samples through the use of radio frequency ID technology to further guard against any potential mix-ups that could occur.
- This added layer of protection will be used in conjunction with the employee witnesses and verification that already occurs within the IVF Lab.
- All current and new patients will be assigned a card with a unique personal code to begin the process.



# Discharge from NYP

## Discharge Instructions for M8:

- Comprehensive instructions provided upon discharge
- Rest at home for the rest of the day
- Mild cramping, discomfort and spotting is common
  - o **Tylenol ONLY for discomfort**
    - No ibuprofen or aspirin
- Contact CRM for:
  - extreme pain
  - heavy bleeding
  - Inability or lack of urination
  - fever >101°
- Avoid placing anything vaginally – (tampons, douching, intercourse) for 2 weeks after retrieval
  - Recommend avoiding tub baths and swimming
- Oral medication instructions may be provided

**NYP policy requires all patients be discharged with an adult chaperone**



# Day After the Retrieval

- An IVF nurse will call with the following information:
  - Total number of eggs (oocytes) retrieved
  - Number mature and immature
  - Number of fertilized embryos
  - Confirm if ICSI was performed
    - Sperm injection – assisted fertilization
  - Provide progesterone instructions
    - Daily intramuscular injection
    - Supports the uterine lining
    - Supports the natural (endogenous) production of progesterone
  - Discuss “planned” transfer schedule
    - Day 3 vs. Day 5
    - Based on embryo development, lab assessment and physician evaluation
- If plan includes retrieval and **NO TRANSFER**  
(Cryopreservation of oocytes or embryos):
  - Oocytes cryopreservation:
    - Done on day of retrieval
    - No progesterone supplementation
  - Embryo cryopreservation:
    - Done based on plan from physician and lab evaluation



# Embryo Transfer

## Embryo Transfer Plan:

- Discussed with physician in advance
- Criteria for transfer include:
  - Age
  - Quality of embryo(s)
  - Number available for transfer
  - Prior history
  - Genetic results (if available)
- Transfers are done in the IVF Suite (same location as retrievals)
  - No anesthesia for transfer ~ free to eat and drink before
  - No escort required
- Transfers scheduled as “Day 3” or “Day 5 – Blast”
- Physicians rotate coverage daily



# Following the Embryo Transfer

## After leaving transfer suite:

- Rest in recovery (rest time can vary)
- No required bedrest – light, normal activity
- Refer to “Post Transfer Instructions” for next steps and testing dates
- Continue all medications prescribed
  - Only Tylenol for discomfort
    - No ibuprofen or aspirin products

## Remaining embryos following transfer:

- Embryology lab will evaluate remaining embryos to determine if they are suitable for cryopreservation
- Embryos that meet the criteria can be frozen (cryopreserved) for future use
- Additional consents are *required* – signed in advance
  - Embryology will confirm if embryo(s) are under “observation” and being evaluated
  - Cryopreservation occurs on Day 5 or 6
  - Nursing will notify *only if* embryo(s) were cryopreserved – generally Day 7





# Luteal Phase – Embryo Transfer to Pregnancy Test

## Pregnancy blood test:

- Pregnancy test Day 28
  - Scheduled date provided
  - Testing schedule Monday through Friday

## If the test is positive:

- Instructions for additional bloodwork and ultrasound evaluations will be provided
- Nursing will review medication instructions
  - 4 weeks pregnant at this point
  - Monitoring will continue with IVF team through week 7 – then discharged to OB

## If the test is negative:

- Instructions to discontinue medications
- Schedule an appointment with your doctor for a cycle review and plan for next steps



# Possible Risks Associated with IVF

- **Ovarian Hyperstimulation Syndrome - OHSS**
  - Occurs when the body “overreacts” to the medication
    - Severe bloating, weight gain, urinary retention, distention
    - Contact the office for any of these symptoms
  - OHSS is rare at CRM
    - Frequent and individualized monitoring
- **Cycle Cancellation**
  - Poor response
    - Convert cycle to IUI
    - Possibly re-cycle with alternative approach
  - Medical issues



# Clinical and Research Consents

# Consents for Treatment

## Three types of consents at CRM:

- **Treatment Consents – reviewed with physician at consult and Research Team available for questions**
  - Must be completed and submitted on the 1<sup>st</sup> day of cycle
  - Require both partner signatures (where applicable)
    - IVF Treatment Consent - required consent for monitoring and treatment
    - ICSI Consent – sperm injection for assisted fertilization
    - Cryopreservation – freezing of remaining oocytes or embryos
    - Assisted Hatching - day 3 embryo(s) evaluation for “hatching” prior to transfer
- **Research Consents**
  - Patient participation is voluntary
  - Relate to active research studies at CRM
  - Consent obtained in the presence of a CRM Research Coordinator
- **Additional Treatment Consents**
  - Apply to patients requiring additional services or treatments
    - Authorization for Frozen Sperm Use
    - Donor Sperm
    - Religious Observation
    - Pre-implantation Genetic Testing or Screening



# Preimplantation Genetic Testing PGD/PGS

**If PGT has been recommended by your physician, you must meet with our genetic counselors to discuss testing and sign consents before beginning your cycle**

**In addition to counseling PGD requires:**

- **ICSI for insemination**
- **Special consent forms that patient or couple MUST sign in the office**
  - **cannot be done on day of egg retrieval**
- **These required consent forms are provided at the counseling session**



# Preimplantation Genetic Testing PGD/PGS

- ~ Embryos are created on retrieval day (day 0)
- ~ Biopsied on day 5 or 6
- ~ Frozen immediately after biopsy
- ~ Patients are notified on Day 6-7 with the number of embryo(s) biopsied
  - if day 6-7 is a weekend calls are made on Monday
- ~ Embryo(s) remain in storage awaiting test results

***Planning for a Frozen Embryo Transfer of tested embryos will be arranged after the genetic counselor has reviewed the results of the biopsy***



# Medication and Injection Planning



# Medication Protocol

## Following the Orientation Class:

- An IVF nurse coordinator will reach out to review plan, timing and medication needs

**PRIOR AUTHORIZATION MAY BE REQUIRED**

**CONTACT INSURANCE BEFORE FILLING PRESCRIPTIONS**

**Failure to secure this information CAN impact your out of pocket expenses**

- **Confirm pharmacy location to fill prescriptions**
  - **May require one pharmacy for injectable needs and one for other prescriptions**
- **Clarify the in-network (insurance coverage) FSH (Gonal-f or Follistim) and antagonist (Ganirelix or Cetrotide)**
- **NOTE: patients must confirm fertility coverage (treatment & medication) prior to starting treatment**

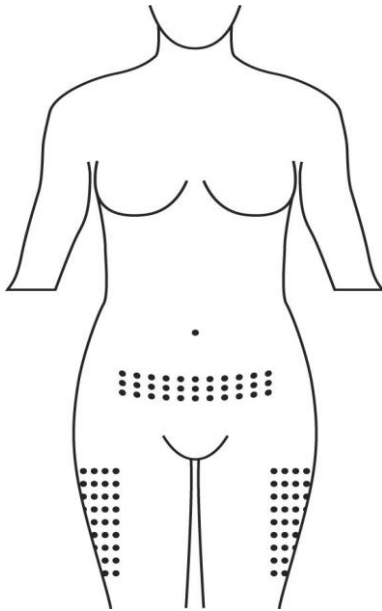




# Injections Sites

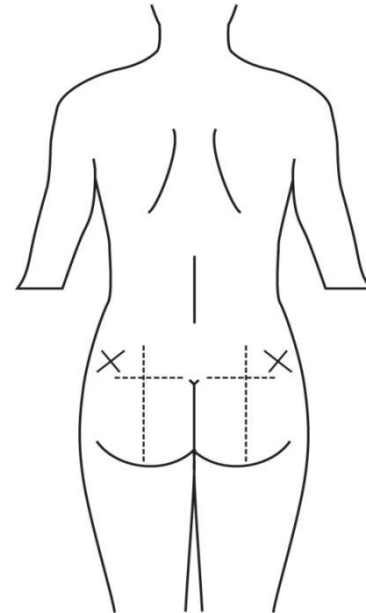
## Subcutaneous Sites (sub-q):

- Location for medications used for stimulation
- Rotate sites as highlighted
- Sub-q sites for “daily” injections



## Intramuscular Sites (IM):

- Used for hCG and progesterone injections
- Upper-outer quadrant of the butt
- Rotates sides each night



# Sharps Disposal

## Disposal Guidelines:

- Regulated biohazard sharps containers available at pharmacy
  - Puncture-proof containers only (as shown)
  - No needles can go in regular garbage
  - No alternative containers
- Sharps containers can be discarded at CRM
  - NO LOOSE NEEDLES
  - Never in regular garbage



# Preparing for Daily Injections

## Supplies:

- Alcohol wipes
- Gauze pads
- Band-aides
- Antibacterial hand soap or hand sanitizer
- Sharps container
- Clean area for preparation and injection

## Medications:

- Ensure medication inventory matches nursing instructions
- Review refill status on orders
  - additional medication and supplies are at pharmacy
- Check that all needle supplies match needs
- Refrigerate medications as required



# Medication Injection Training

- Both subcutaneous and intramuscular techniques will be reviewed
- Additional support is available on-line at [Freedommedteach.com](http://Freedommedteach.com)

## Reminders:

- Select a time for nightly injections – between 7pm and 10 pm
  - As close to same time each day as possible
- If assistance with injections is needed - anticipate needs
- Refrigeration requirements for medications



# Psychological Support Services

The CRM clinical team recognizes and supports the impact that fertility treatment has on both your personal and professional life.

Specially trained psychologists are on staff and available for appointments – (646) 962-2764

**Visit our website for ongoing webinars that are available ([ivf.org](http://ivf.org))**



# Reference Web Sites

- **CRM site** – [www.ivf.org](http://www.ivf.org)
- **Resolve** – Advocacy Organization – [www.resolve.org](http://www.resolve.org)
- **Injection references:**
  - Freedom Pharmacy page – [www.freedommedteach.com](http://www.freedommedteach.com)
  - Ferring Pharmacy page – [www.ferringusa.com](http://www.ferringusa.com)
    - Include training videos
    - Reconstitution and injection techniques



# Ronald O. Perelman and Claudia Cohen Center for Reproductive Medicine

**“We are passionate about helping our patients become parents”**

## **Dr. Zev Rosenwaks**

Director and Physician-in-Chief, Ronald O. Perelman and Claudia Cohen  
Center for Reproductive Medicine





**Weill Cornell Medicine**

 **NewYork-Presbyterian**