



Jordanian Society for Fertility and Genetics
JFSG Guidance on Recommencing ART and Infertility
Treatments during COVID-19 outbreak

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This JSFG guidance comes in response to the coronavirus (COVID-19) global pandemic crisis and to the need of restarting provision of ART and Infertility treatments.

As the risk of SARS-CoV-2/COVID-19 infection is decreasing relatively in Jordan, the return to normal daily life should be modified to be the return to a new life taking in consideration the following:

1. existing potential risk of corona virus infection
2. COVID-19 is a new challenge to our healthcare systems (NEW).
3. limited evidence/or no evidence at many aspects.
4. Strict adherence to the general health precautions and local lockdown instructions and measures.
5. This guidance might change at any time to cope with future health situations.

The society board members and the Advisory committee identified pillars of good medical practice proposed for the restart of activity in the ART clinic and labs.

1. Information and consent to the start of treatment
2. Prioritization and exclusion
3. Staff and patient triage
4. Practical safety measures for staff and patients.
5. Access to advice and treatment
6. Treatment cycle planning.

1. information and consent to start treatment

Patients must be comprehensively informed, clearly understand the risks related to COVID-19 disease, this can be achieved by loading the websites of the clinic and IVF unit of all relevant data and make it available as a fact sheet as well.

Patients should be carefully counselled, taking into account their individual clinical situation and risk profile, and the likely persistence of the virus in the local community in the medium term.

This counselling and the patient's decision whether or not to proceed with fertility treatment should be documented in the medical record.

All patients must sign an informed consent before starting the treatment.

All patients should be offered a choice to proceed with or postpone their ART treatment and in both cases patient preference should be clearly documented.

2. Prioritization and exclusion:

It is not possible to treat all patients upon fertility service resumption, so it is advisable to do Patient prioritization with priority given to:

1. Fertility preservation in Cancer patients.
2. Low ovarian reserve patients.
3. Advanced reproductive age patients.

The above list should be left to the unit judgment.

Exclusion:

Patients with diabetes, morbid obesity, hypertension, using immunosuppressant therapy, past transplant patients, lung, liver or renal disease should not start ART treatment until it is deemed safe to do so by relevant healthcare professionals and/or local health authorities.

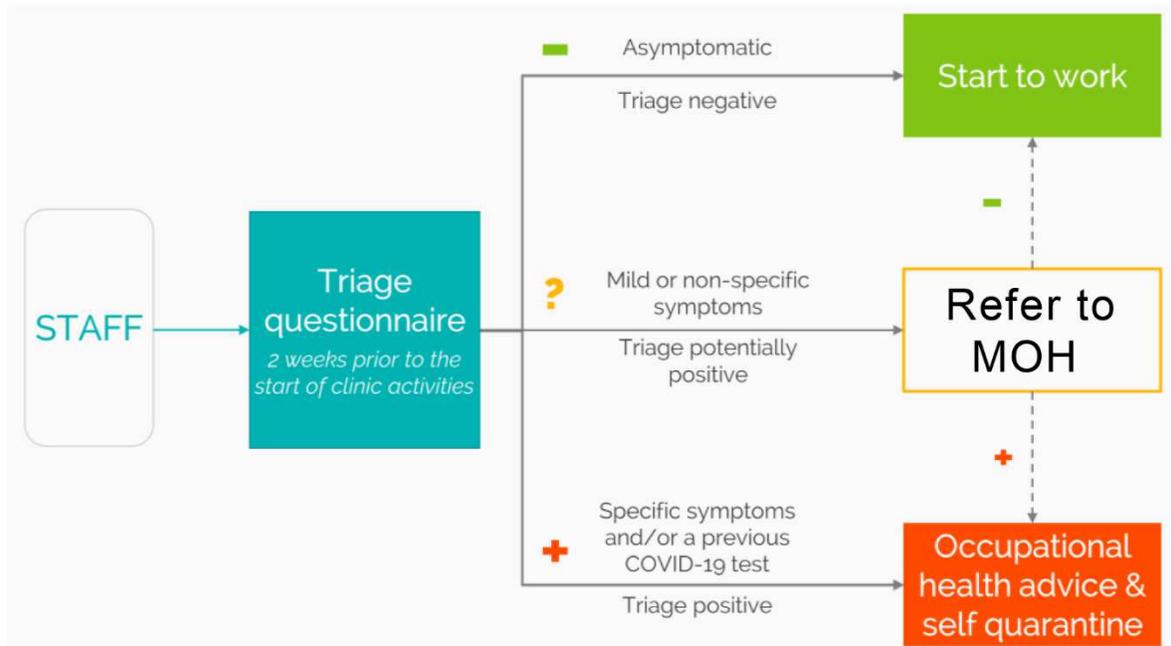
3. Staff and patient triage and management.

ESHRE provides an ART triage questionnaire which can be used/adapted for the triage of both staff and patients (see Appendix 1).

Procedure for staff:

1. Triage information regarding health status, symptoms and lifestyle of the clinic team members and of individual(s) living in the same household should start at least two weeks before the beginning of clinical activities at the center.
2. Staff, suspected of infection after triage, should be referred to specialized Ministry of health (MOH) hospitals.
3. All staff members who test positive should be referred to specialized MOH hospitals
4. Staff who are symptomatic should be referred for medical advice and testing and should not re-attend work until the infection is cleared and documented by negative RT-PCR test or equivalent.
5. Contact tracing and testing should be routine if a staff member is diagnosed with COVID-19 infection.
6. Depending on the size of the unit, staff should be subdivided in “mini-teams” with minimum interactions among them. Teams should work according to a rotating schedule, similar to the one adopted for weekend work.

Summary figure staff triage



Procedure for Patients:

General advice to self-isolate, if possible, from the start of ovarian stimulation treatment until embryo transfer

1. Before starting treatment:

A screening questionnaire (see Appendix 1 & 5) should be completed using the telephone or online two weeks before treatment

2. During treatment: The screening questionnaire should be administered prior to every clinic visit.

Scenario I (include):

- Both patients are triaged as low risk (negative clinical history, lifestyle compatible with low/minimal risk of contact with potentially infected individuals)
- Both patients are asymptomatic.

Scenario II (be open minded)

A. Patients who have recovered from a previous COVID-19 infection, proven by certified medical evidence of clearance prior to starting treatment.

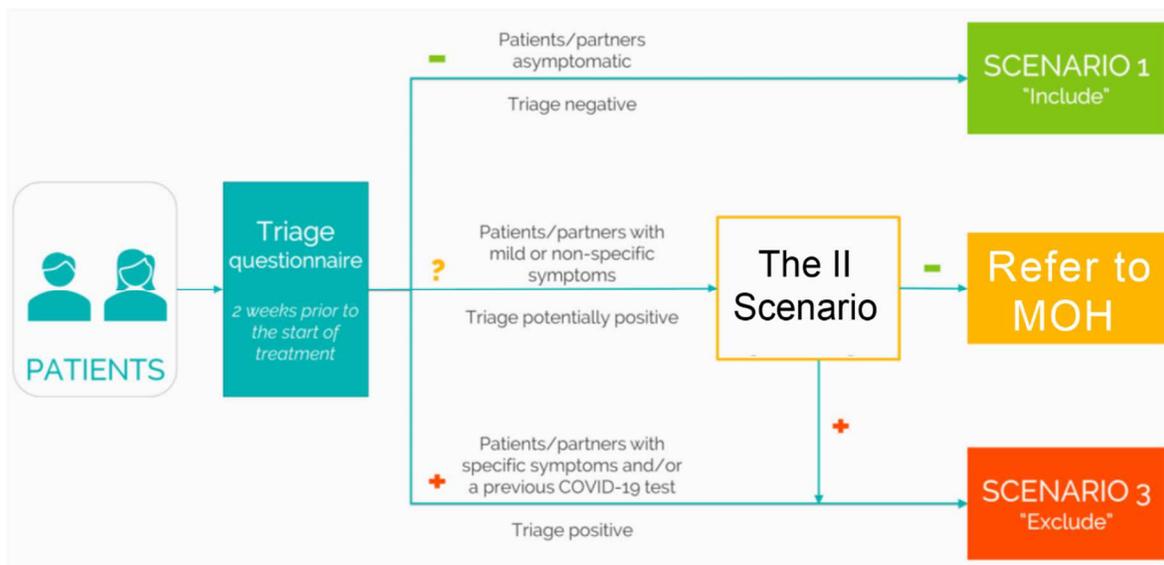
B. Presence of non-specific symptoms in husband or wife before starting ovarian stimulation: Repeat the triage at the beginning of ovarian stimulation.

If negative: Continue the treatment. If positive: refer to MOH hospitals.

C. Non-specific symptoms arising during ovarian stimulation: refer to MOH hospitals. If negative: Continue the treatment.

Scenario III [exclude]

If patients are symptomatic or COVID-19 positive, Refer to MOH hospitals



****JSGF don't recommend routine testing for asymptomatic patients either by PCR or antibodies at the present situation.***

4. Practical safety measures for staff and patients (risk mitigation).

- First line is education and telemedicine activation; telemedicine should be used for all treatment steps that do not require the physical presence of patients at the center.
- Website of JSFG (www.fertigen.com.jo) will have the guidelines uploaded and updated regularly with the most recent available information and links to ensure maximum safety and protection.

- All staff must be trained in the processes and protocols for dealing with COVID- 19 cases and the use of general precautions and PPE (donning and doffing) to reduce transmission.
- For patients, it is very useful to develop a written summary of the scientific evidence of pregnancy and reproduction with the coronavirus, including frequently asked questions which align with international guidance and are under daily review that is available both online and within the clinics.

Activation of:

Online

questionnaire

Online

consultation

Online consents

Online educational

forums Online

meetings

- Strict adherence to the general health precautions for social and physical distancing and compliance to the local lockdown instructions is the cornerstone of our success.
- All staff are to consider personal risk when commuting.
- strict adherence to the general health precautions and local lockdown instructions and measures.
- Creation of staff back up by creating mini teams for professional, managerial, administrative, and IT staff if feasible and moved to a rotational schedule to reduce the risk of all being infected simultaneously.
- Creation of unit/lab back up by liaising with other labs in case of complete lab closure.
- IVF doctors should liaise with their colleagues to substitute them in case of quarantine or infection.
- Restricting access to waiting rooms
- Spacing of clinical appointments to reduce inter-patient contact and crowding
- Adopt clinical protocols that minimize the number and duration of monitoring visits to the clinic
- sanitization of ultrasound probes and the cables after each patient
- Request to patients to attend alone and to wait outside in their own cars until the scheduled appointment to reduce overall risk of transmission.

- Clinic layout must change to adopt:
 - Spacing of furniture to ensure physical distancing.
 - Physical barriers between staff and patient.
 - Physical distancing at all times.

- On completion of the consultation and the explanation that treatment will be deferred, the patient is transported outside the clinic using a predetermined route to minimize the possible exposure of health personnel, other patients, and visitors.
- All rooms and areas are then carefully sanitized; unit/clinic sanitation should follow the specific COVID-19 sanitation procedures put in place by national or local competent authorities.
- After use, the disposable protective devices are carefully removed, folded in on themselves with hand sanitization with alcohol gel at each stage of removal before final disposal in an appropriate container for infected waste.

What kind of PPE should staff and patients wear during reproductive care procedures and activities?

This is illustrated in Appendix 4 (read below).

5. Access to advice and treatment

Patient education on COVID-19 risk and prevention is an essential step prior to acceptance for treatment. Patient education should include:

- Tutorials on the use of personal protective equipment (PPE), if required.
- Advice on continuation of social distancing and avoidance of unnecessary human physical contact.
- Information about symptoms of SARS-CoV-2/COVID-19 infection or exposure occurrence
- Agreement that treatment can be discontinued if the patient encounters a high-risk situation

6. Treatment cycle:

A. Ovarian stimulation: The following specific precautions should be taken:

- Minimal exposure for both staff and patients.
- Use of personal protective equipment (PPE) by staff (see appendix 4)
- Minimal number and duration of visits and optimized number of blood tests
- Vaginal probe and tissue hygiene

- Re-triage of patient at each visit and action depending on pre-triage results or new symptoms.
- JSFG recommends the use of fixed antagonist protocol for stimulation.
- A greater caution should be taken in patients with high risk for ovarian hyper-stimulation syndrome by adopting agonist trigger and freeze all policy to avoid hospitalization

B. Oocyte retrieval

In addition to general precautions and based on triage results, the following recommendations are made:

- **Scenario I:** Follow standard procedures unless changes occur between ovulation trigger and oocyte retrieval
- **Scenario II:** If positive re-triage, refer to MOH.
- **Scenario III:** If the patient tests positive before ovulation trigger, Cancellation and refer to MOH hospitals.

C. Embryo transfer

- a. Limit the number of staff members in the transfer room
- b. Restrict access for accompanying person(s)
- c. Perform transfer only in cases of low risk/asymptomatic patients and partners
- d. Apply a freeze-all policy for all patients and/or husbands who became symptomatic

Laboratory guidelines:

1. Staff safety

- All IVF laboratory staff are requested to undergo triage questionnaire two weeks prior to the start of the clinic activities and at onset of the laboratory work.
- All IVF laboratory staff are requested to adhere to the principles of using proper PPE during their lab activities (scrubs, head caps, surgical masks and gloves), communication with patients (scrubs, head caps, N95 or equivalent masks, goggles or face shield and

gloves) or when dealing with liquid nitrogen vapor (scrubs, N95 or equivalent masks, goggles or face shield and cryogloves).

- All scrubs are encouraged to be changed and washed on daily basis.
- Used gloves should be changed after each procedure.
- Alternative teams are highly recommended to minimize transmission, if applicable.
- All IVF laboratory staff are encouraged to practice social distancing according to the safe distance.
- Assignment of a delegate (e.g. a nurse) to communicate with the patients and receive samples is advisable to minimize the contact between lab staff and outside environment.

2. Sterility and disinfection

- All IVF laboratory staff are urged to wash hands repeatedly with the dedicated disinfectant soap at the beginning of the work day, after each gloves removal between procedures and at the end of the day, followed by anti-bacterial and anti-viral disinfectant (e.g. sterilium).
- All lab bench surfaces, microscopes, centrifuges and instruments should be disinfected with a proper embryo-tested disinfectant (e.g. oosafe) at the beginning, during and at the end of the work day.
- Liquid nitrogen tanks for gamete and embryo storage should be disinfected periodically by using 70% ethanol or any proper disinfectant.
- Hoods with ultraviolet light can be timed to be turned on out of work hours.
- All the laboratory areas should be disinfected on daily basis with a proper floor embryo- tested disinfectant.
- All cardboard boxes should stay and unpacked outside the laboratory.

3. Gamete and embryo handling

- Semen should be always considered as a potential source of infection and the sample container is not allowed to be touched without gloves.
- Gloves should be discarded after each procedure and new ones should be used for next patient.
- Semen preparation is recommended to be prepared by using density gradient followed by swim up technique.
- Patients should be encouraged to produce semen samples at home and delivered to the IVF laboratory. If the sample is delivered to the lab by the wife, a signed consent by the husband should be received with the sample.
- Oocytes and embryos should be washed repeatedly to dilute any possible viral contamination.
- Any invasive procedure to the zona pellucida should be decided cautiously since zona pellucida is considered as a natural barrier to the viral contamination from the media.

4. Air quality

- Check the air quality filters (HEPA filters), and make sure it is up and running.
- Make sure positive air pressure is well maintained, all through this period inside the laboratory.
- Make sure to check the differential positive pressure between the IVF laboratory and the operating theatre.
- Since all IVF units in Jordan are located in hospitals, make sure a separate HVAC system is designated for IVF area, and the air inside the area is not recycled, and the source of air is always fresh.

5. Gamete and embryo cryopreservation

- Vapor phase tanks are recommended to be used to minimize the risk of cross contamination through LN2, in dipped in tanks.
- In case of unavailability of vapor phase tanks, it is recommended to use closed system cryopreservation straws.
- A gamete quarantine tank is recommended to store the frozen samples until a negative test for COVID-19, is obtained and confirmed again after 4 days, in case of a suspected positive case.
- Training other members of IVF team (Nurses, receptionists) on how to check and maintain the proper level of LN2, in case the lab staff couldn't make it to the lab, for any reason.
- Having an extra liquid nitrogen storage, in case the supplier is not able to reach for a refill, for any reason.

6. Laboratory contingency plan (sudden shutdown):

- All patients will be referred to another IVF unit according to a pre-arranged plan.
- All gametes and embryos at all cleavage stages should be cryopreserved before shutdown.
- All unneeded instruments (e.g. incubators) should be disinfected, switched off and plugged off from the power supply.
- All liquid nitrogen storage tanks need to be filled on weekly basis by a pre-assigned staff.
- All refrigerators and freezers should be connected to a constant power supply.

These guidelines were drawn by the JSFG executive board:

- **Dr. Khaldoun Khamaiseh** : President
- **Dr. Ziad Awwad** : Vice president
- **Dr. Abdel Hamid Malhas** : Financial committee
- **Mrs. Nagham Younis** : General Secretary
- **Dr. Emad Al Sharu** : Chairman of the scientific committee
- **Dr. Firas Reshoud & Mrs. Ban Tell** : Continuous Medical education
- **Mrs. Amal Al Astal** : Secretary of JSFG

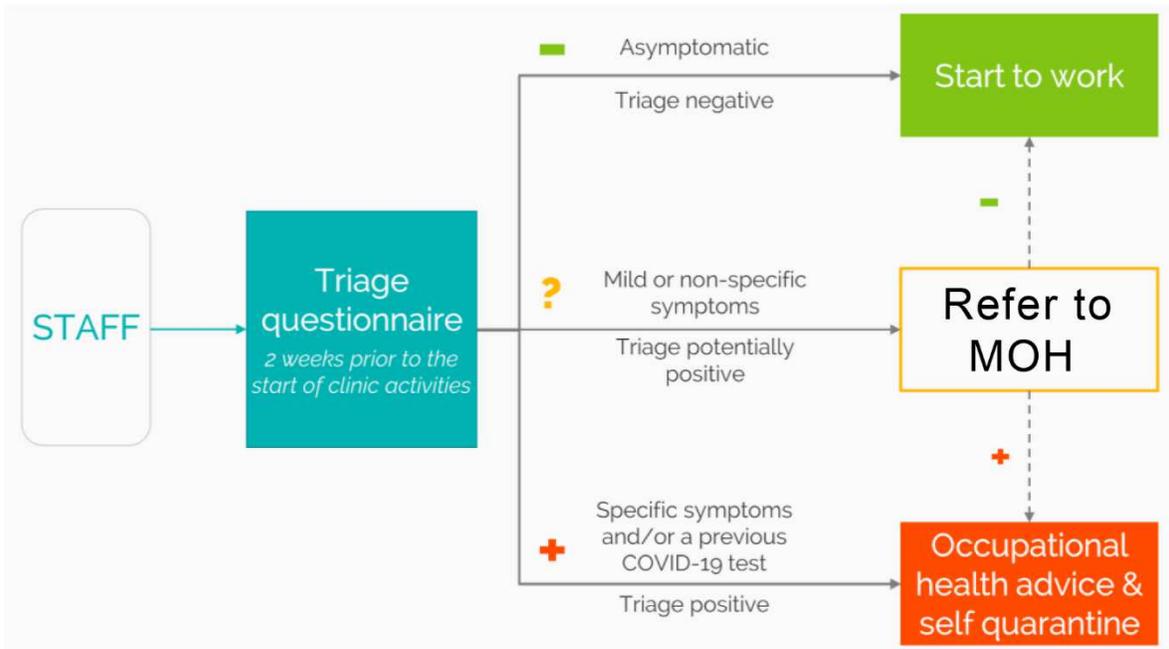
JSFG Advisory Committee:

- **Dr. Mazen Zibdeh**
- **Dr. Faheem Zayed**
- **Dr. Khaldoun Sharif**
- **Dr. Suleiman Dabit**
- **Dr. Aref Al Khaledi**

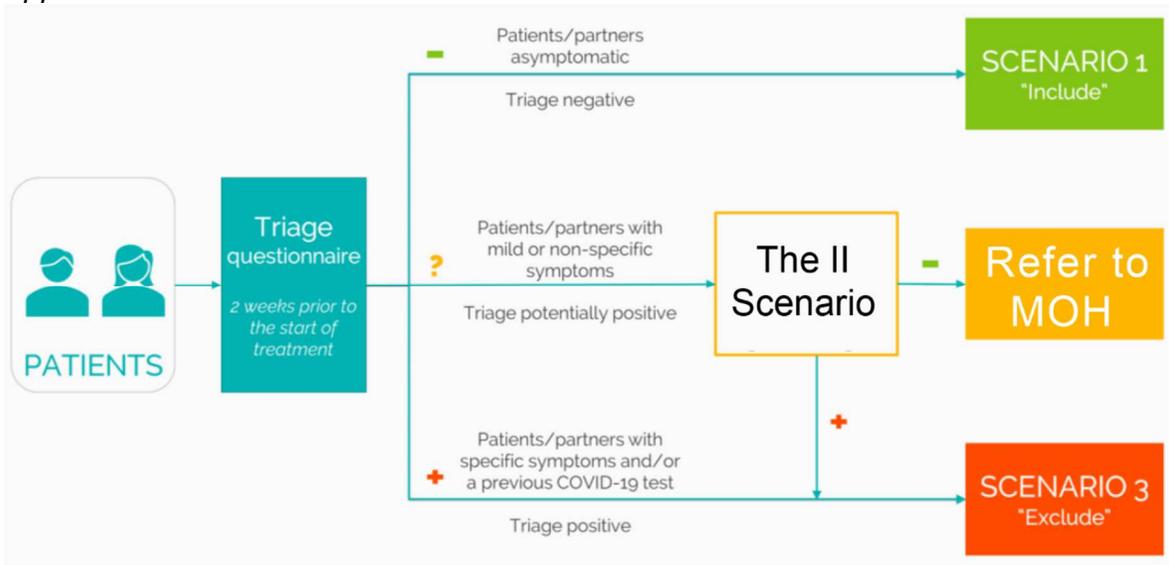
Appendix 1 - ART Triage Questionnaire

1. Have you been sick in the last two weeks?
2. Do you have fever (over 37,5°C)?
3. Are you coughing at present?
4. Do you have a sore throat?
5. Have you lost your sense of smell or taste?
6. Have you been in contact with somebody who has any of these symptoms?
7. Have you travelled to an area at high risk for COVID-19, nationally or internationally?
8. Do you work in a hospital/nursing home or healthcare facility?
9. Have you been in contact with somebody who has COVID-19?
10. Have you been you diagnosed with COVID-19?
11. Do you live in a household with somebody who has been diagnosed with COVID-19 infection or has COVID-19 symptoms (fever, cough, loss of smell)?
12. If you have been COVID-19 positive and recovered, do you have certified medical evidence of clearance?
13. Do you have a severe medical condition like diabetes, respiratory disease, chronic kidney disease, etc.? *(this question can be skipped when using the ART triage questionnaire for staff).*

Appendix 2



Appendix 3



Appendix 4

Risk assessment and mitigation for reproductive care procedures and activities

Procedure/Activity	Potential Risk	Mask Type Required for Staff	Other PPE Required for Staff	PPE Required for Patients
Clinic Entry Screening	Droplet	Medical Grade	Gloves	Cloth Mask
Patient Registration	Droplet	Cloth Mask	---	Cloth Mask
Vital Sign Measurement	Droplet	Medical Grade	Gloves	Cloth Mask
In Office Consultation	Droplet	Cloth Mask	---	Cloth Mask
Phlebotomy	Droplet, Splash, Needle Stick	Medical Grade	Face Shield, Gloves	Cloth Mask
Ultrasound	Droplet	Medical Grade	Gloves	Cloth Mask
Saline Infusion Sonogram	Droplet, Splash	Medical Grade	Face Shield, Gloves	Cloth Mask
Hysterosalpingogram	Droplet, Splash	Medical Grade	Face Shield, Gloves	Cloth Mask
Office Hysteroscopy	Droplet, Splash	Medical Grade	Face Shield, Gloves	Cloth Mask
Endometrial Biopsy	Droplet, Splash	Medical Grade	Face Shield, Gloves	Cloth Mask
Specimen Handling (Blood, Semen, Follicular Fluid)	Splash	Medical Grade	Face Shield, Gloves	N/A
Lab Procedures (ICSI, biopsy, specimen prep, etc.)	Droplet, Splash	Medical Grade	Gloves	N/A
Intrauterine Insemination	Droplet	Medical Grade	Gloves	Cloth Mask
Embryo Transfer	Droplet	Medical Grade	Gloves	Cloth Mask
Pre-Op Holding Area	Droplet	Medical Grade	Gloves	Cloth Mask
IV Line Insertion	Droplet, Splash, Needle Stick	Medical Grade	Face Shield, Gloves	Cloth Mask
Airway Management	Droplet, Aerosolization	N95 or Equivalent	Face Shield, Gloves	N/A
Oocyte Retrieval	Droplet, Splash, Needle Stick	Medical Grade	Face Shield, Gloves	N/A
Operative Hysteroscopy	Droplet, Splash, Needle Stick	Medical Grade	Face Shield, Gloves, Gown	N/A
Operative Laparoscopy	Droplet, Splash, Needle Stick	Medical Grade	Face Shield, Gloves, Gown	N/A
Open Reproductive Surgery	Droplet, Splash, Needle Stick	Medical Grade	Face Shield, Gloves, Gown	N/A
Post Anesthesia Care Unit	Droplet, Splash	Medical Grade	Face Shield, Gloves	Cloth Face Mask when able

Appendix 5



الجمعية الاردنية للخصوبة والوراثة

استبيان استقصائي قبل البدء بمعالجة حالات العقم والانجاب أثناء جائحه كورونا

1. هل مرضت في الاسبوعين الماضيين؟ نعم لا
2. هل لديك حمى (أكثر من 37.5 درجة مئوية)؟ نعم لا
3. هل تسعل في الوقت الحالي؟ نعم لا
4. هل لديك التهاب بالحلق؟ نعم لا
5. هل فقدت حاسة الشم أو التذوق؟ نعم لا
6. هل كنت على اتصال بشخص لديه أي من هذه الاعراض؟ نعم لا
7. هل سافرت الى منطقة معرضة لخطر الاصابة ب COVID 19- فيروس كورونا محليا أو دوليا؟ نعم لا
8. هل تعمل في مستشفى أو دار رعاية أو مرفق رعاية صحية؟ نعم لا
9. هل كنت على اتصال مع شخص لديه فيروس كورونا COVID 19؟ نعم لا
10. هل تم تشخيصك بفيروس كورونا COVID 19؟ نعم لا
11. هل تعيش في منزل مع شخص تم تشخيص حالته عدوى COVID 19 أو أعراض COVID 19 (حمى - سعال- فقدان رائحة)؟ نعم لا
12. إذا كان لديك فيروس كورونا COVID19 ايجابي وتعافيت، هل حصلت على شهادة دليل طبي على الشفاء؟ نعم لا
13. هل لديك حالة طبية شديدة مثل السكري وأمراض الجهاز التنفسي، أمراض الكلى المزمنة أو ما الى ذلك؟ نعم لا

Appendix 6

مرض كوفيد-19

هو مرض معدٍ يسببه فيروس من عائلة فيروسات كورونا أعراضه الشائعة هي :

1. الحمى الشديدة
2. السعال الجاف
3. التعب العام
4. فقدان حاسة الشم والتذوق

أما نسبة التعافي منه فتصل إلى 80%.

ينتشر المرض بشكل رئيسي عن طريق القطرات الصغيرة التي يفرزها الشخص المصاب من فمه أو أنفه عند السعال أو العطس أو التكلم. يمكن التقاط القطرات عند التنفس أو ملامسة أو طح ملوث بها. بالتالي نقلها للأنف أو العين أو الفم.

عند البدء ببرامج المساعدة على الحمل في حال تغيير الإجراءات الصحية في الدولة أو الإغلاق العام وف يتم إيقاف البرامج مما يضمن مصلحة الزججين المصلحة العامة التقيد بإجراءات وزارة الصحة.

في حال إصابة أي من الزججين بمرض كوفيد-19 وف يتم الرجوع إلى القوانين المعمول بها في وزارة الصحة إجراءات الجمعية الأردنية للخصوبة والوراثة

قبل الحضور إلى العيادة أو مركز الاختصاص يجب التقيد بالأمور التالية: -

1. عدم اصطحاب الأطفال
2. البقاء في السيارة قبل الدخول للعيادة انتظار الموعد العيادية
3. الاتصال مع العيادة قبل الدخول لتجنب الازدحام
4. لبس الكمامة القفازات تعقيم اليدين قبل الدخول
5. الحرص على التباعد الجسدي - الاجتماعي لمسافة مترين
6. في حال وجود أي أعراض للانفلونزا (عال- حرارة- إعياء عام) إبلاغ الطبيب المعالج
7. الالتزام بوجود مرافق واحد
8. مدة الفحص تكون مختصرة حسب ما يراه الطبيب المعالج

References:

1. **ESHRE guidance on recommencing ART treatments**
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2. **Reproductive Technology Accreditation Committee (RTAC) TECHNICAL BULLETIN 12**
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3. **AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE (ASRM) PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC**
Update #3 (April 24, 2020 through May 11, 2020)
4. **La Marca, A., Niederberger, C., Pellicer, A., & Nelson, S. M. (2020).**
COVID-19: lessons from the Italian reproductive medical experience. Fertility and sterility, 113(5), 920.
5. **The Association of Reproductive and Clinical Scientists (ARCS) and British Fertility Society (BFS) U.K. best practice guidelines for reintroduction of routine fertility treatments during the COVID-19 pandemic.**