



# The Impact of COVID-19 Pandemic on Oncofertility Services in Advanced Reproductive Centre UKM Medical Centre Malaysia

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The COVID-19 infection is an infectious disease characterized by severe respiratory symptoms and was discovered as a terminal infection starting in December 2019 in Wuhan China. In Malaysia, our first Covid-19 positive cases found on 25 January 2020. Subsequently, there was an increasing trend of confirmed cases leading to the implementation of Movement Restriction Order (MCO) Act starting on 18 March 2020 aiming to flatten the infection curve. During this pandemic, UKM Medical Centre services were modified as hybrid-COVID-19 cluster hospital and treating both confirmed COVID-19 cases and standard cases. This modification is significantly affected overall our health management, including our oncofertility services. We were sharing the experience of the impact of Covid-19 toward our oncofertility services and modification to overcome it. We experience the reduction of oncofertility services uptake during this period due to both clinician and patient attitude while combating the pandemic Covid-19 battle in Malaysia.

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## Introduction

The COVID-19 infection (Coronavirus disease 2019) is an infectious disease characterized by severe respiratory symptoms [1]. It was discovered as a terminal infection starting in December 2019 in Wuhan China and it had been spreading worldwide [2]. In Malaysia, our first Covid-19 positive cases discovered on 25 January 2020. Subsequently, there was an increasing trend of confirmed cases leading to the implementation of Movement Restriction Order (MCO) Act starting on 18 March 2020 aiming to flatten the infection curve. As of 28 May 2020; a total of 7629 confirmed cases with 6169 recoveries and a total of 115 deaths reported in Malaysia [3]. During this pandemic, UKM Medical Centre services were modified as hybrid-COVID-19 cluster hospital and treating both confirmed COVID-19 cases and standard cases. These modification is significantly affected overall our health management including our oncofertility services. Newly diagnosed cancer with significant treatment-related gonadotoxic effect among children and reproductive age group will be referred for oncofertility review for Fertility Preservation (FP) treatment. The decision of the types of FP depends on allowable period before initiating the primary cancer treatment [4]. Choices of the embryo, oocytes, sperm and ovarian tissue cryopreservation are offered to tailor to the patient profile. However, due to the current global recommendation, the Assisted Reproductive Technique (ART) services are postponed due to COVID-19 pandemic [5]. Although the international body mainly European Society Medical Oncology (ESMO) and American Society Clinical Oncology (ASCO) has highlighted that FP is considered as an urgency among cancer cases and should not be deferred, majority of the oncology clinician are not aware thus less referral was made during this period [4-6].

In our oncofertility services, embryo cryopreservation is one of highest up-take; thus it required usual In Vitro-Fertilization (IVF) cycle including ovarian stimulation, oocytes pick up, intracytoplasmic sperm injection (ICSI) followed by standard cryopreservation. The additional cost of COVID-19 screening for both couple before the procedure added to the IVF cost and cancer treatment itself possess a significant financial burden to the couple. Furthermore, the stigma of visiting the hospital with fear of contracting the virus during treatment period leading to a higher number of couple decline the FP treatment in our centre. From our simple survey, most of our patient developed a complex emotional thought related to isolation or quarantine should they diagnosed with COVID-19, especially during receiving FP treatment. Therefore, they willingly opted out from FP treatment and barely followed the primary cancer treatment. Sadly we found that some of the cancer patients defaulted just due to this issue.

In cases for Ovarian Tissue Cryopreservation (OTC), we need to modify the laparoscopic procedure to a mini-laparotomy for oophorectomy. The laparoscopic route is currently prohibited in order to reduce the risk of aerosolizing of air droplet among the health worker. Thus, they required hospitalization as compared to the laparoscopic route. As most of OTC cases is prepubertal, we hardly receive any referral mostly due to anxiety of parent to accept the FP treatment and only concentrated with primary cancer treatment during this pandemic period. In our oncofertility clinic setting was also affected as only two-person are allowed per clinic session. Previously, our clinic was conducted in the presence of a psychologist aiming to tackle the emotional element while proposing FP treatment effectively. The presence of family members as a support system is vital to ensure the synchronized decision is made with better FP outcome can be achieved. However, restriction of the number of people to reduce risk of COVID-19 infection leads to ineffective consultation, thus poor FP uptake. To overcome this, we activate the telemedicine via a phone call and video consultation as a platformed for FP consultation and information [7]. Despite that, the uptake is still low as this consider a new “norm” among patient and relative. Although we do highlight that the oncofertility treatment should not be delay despite COVID-19, and modification of the services had been made, we foresee that the uptake will remain low. Therefore, we hope that physician dealing with cancer cases will be more proactive in referring suitable cases to oncofertility centre despite we battling with COVID-19 pandemic as it will significantly impact their life in future. We do provide a unique strategy in reducing the risk of infection during treatment and follow the standard operating procedure (SOP) as implement by the Ministry of Health. Therefore, the COVID-19 outbreak should not interfere with oncofertility treatment is aiming for a better future among cancer survivors. Otherwise, no financial or other potential conflicts of interest to declared.

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