

Supplementary Material - A

Table 1: The 39 Surveyed Oncofertility Centers in Repro-Can-OPEN Study Part I & II

Repro-Can-OPEN Study Part I: Salama M, Ataman-Millhouse L, Braham M, et al. [Installing oncofertility programs for common cancers in limited resource settings \(Repro-Can-OPEN Study\): An extrapolation during the global crisis of Coronavirus \(COVID-19\) pandemic.](#) J Assist Reprod Genet. 2020;37(7):1567-1577.

Repro-Can-OPEN Study Part II: Practice Committee of the Oncofertility Consortium. [Installing oncofertility programs for common cancers in optimum resource settings \(Repro-Can-OPEN Study Part II\): a committee opinion.](#) J Assist Reprod Genet. 2021;38(1):163-176.

Surveyed Oncofertility Centers with Limited Resource Settings (Repro-Can-OPEN Study Part I): (n=14)	
1	National Research Center, Cairo, Egypt
2	Aziza Othmana Hospital of Tunis, Tunisia FERTILLA, Clinique la Rose, Tunis, Tunisia
3	Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil
4	Laboratorio de Biología Reproductiva y Preservación de la Fertilidad, Laboratorios de Investigación y Desarrollo, Universidad Peruana Cayetano Heredia, Lima, Peru Unidad de Oncología Pediátrica, Hospital Edgardo Rebagliati Martins, Lima, Peru
5	Panama Fertility, Sistema Nacional de Investigadores, Panama City, Panama
6	Pregna Medicina Reproductiva, Buenos Aires, Argentina Hospital de Niños Ricardo Gutiérrez, Buenos Aires, Argentina Procreate, Buenos Aires, Argentina Hospital de Niños Víctor J. Vilela, Rosario, Santa Fe, Argentina
7	Centro de Reproduccion Humana, Facultad de Medicina, Universidad de Valparaiso, Valparaiso, Chile
8	Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Mexico
9	Fertility Preservation Centre, Department of Clinical Embryology, Kasturba Medical College, Manipal Academy of Higher Education, Manipal, India Department of Medical Oncology, Kasturba Medical College, Manipal Academy of Higher Education, Manipal, India Mother and Child Hospital, New Delhi, India Dr. Patil's Fertility and Endoscopy Clinic, Bangalore, India Hospital Institute of Medical Sciences & SRCC children's Hospital, Mumbai, India
10	Vitalab Fertility Centre, Johannesburg, South Africa Department Medical Oncology, University of Witwatersrand, Johannesburg, South Africa Charlotte Maxeke Johannesburg Academic Hospital, Johannesburg, South Africa
11	Instituto Nacional de Cancerología, Bogota, Colombia FERTIVIDA Fertility Center, Bogota, Colombia
12	Instituto Guatemalteco de Seguridad Social (IGSS), Guatemala City, Guatemala
13	Thuriah Medical Center, Riyadh, Kingdom of Saudi Arabia
14	The Oncology and Fertility Centres of Ekocorp Plc, Eko Hospitals, Lagos, Nigeria Kingswill Specialist Hospital, Lagos, Nigeria
Surveyed Oncofertility Centers with Optimum Resource Settings (Repro-Can-OPEN Study Part II): (n=25)	
1	Oncofertility Consortium, Feinberg School of Medicine, Northwestern University, Chicago, IL 60611, USA. Ann & Robert H. Lurie Children's Hospital of Chicago, 225 East Chicago Ave, Box 63, Chicago IL, 60611, USA.
2	Yale Fertility Center and Yale Fertility Preservation program, 200 West Campus Dr., Orange, CT 06477, USA.
3	Karolinska Institutet, Department of Oncology-Pathology and Karolinska University Hospital, Department of Reproductive Medicine, Division of Gynecology and Reproduction, SE-14186, Stockholm, Sweden.
4	Department of Obstetrics and Gynecology, St. Marianna University School of Medicine, 2-16-1, Sagao, Miyamae-ku, Kawasaki, Kanagawa, Japan.
5	Department of Medical Oncology, UOC Clinica di Oncologia Medica, IRCCS Ospedale Policlinico San Martino, Genova, Italy. Department of Internal Medicine and Medical Specialties (DiMI), School of Medicine, University of Genova, Genova, Italy.
6	Fertility Preservation Service, Reproductive Services Unit, Royal Women's Hospital, Parkville, 3051, Australia. Fertility Preservation Service, Melbourne IVF, East Melbourne, 3002, Australia.
7	Children's National Hospital, 111 Michigan Avenue NW, Washington, DC 20010, USA. (ZIA# HD008985)
8	Center for Reproductive Medicine, Michigan Medicine, 475 Market Place, Building 1, Suite B, Ann Arbor, MI 48108, USA.
9	Fertility Research Centre, Royal Hospital for Women, Barker Street, Sydney, Australia.
10	Stanford University Medical Center, 300 Pasteur Drive, Stanford, CA, USA.
11	University of Edinburgh, Edinburgh, UK. Royal Infirmary of Edinburgh and Royal Hospital for Children and Young People, Little France Crescent, Edinburgh, UK.
12	Nationwide Children's Hospital, 700 Children's Dr., Columbus, OH 43205, USA.
13	University of Pennsylvania, Division of Reproductive Endocrinology & Infertility, 3701 Market Street, Suite 8000, Philadelphia, PA 19104, USA.
14	New York University, NYU Langone Fertility Center, 660 First Ave, 5th Floor, New York, NY 10016, USA.
15	UniKid - Center for Reproductive Medicine, UniCareD - Center for Fertility Preservation, Düsseldorf University Hospital, Moorenstrasse 5, D-40225 Düsseldorf, Germany.
16	Laboratory of Reproductive Biology, Juliane Marie Centre for Women, Children and Reproduction, University Hospital of Copenhagen, Blegdamsvej 9, DK-2100 Copenhagen, Denmark.
17	Fertility Preservation Service, The Royal Children's Hospital, Flemington Rd, Parkville, Melbourne, Vic 3054, Australia.
18	University of California, San Diego, 3855 Health Sciences Drive, La Jolla, CA 92039-0901, USA.
19	Cliniques Universitaires Saint Luc, Université Catholique de Louvain, Avenue Hippocrate, 10, 1200 Brussels, Belgium. Université Catholique de Louvain, Avenue Mounier 52, 1200 Brussels, Belgium.
20	Fertility Clinic and Research Laboratory on Human Reproduction, CUB-Erasme Hospital, Université Libre de Bruxelles (ULB), 808 route de Lennik, 1070 Brussels, Belgium.
21	Centre for Reproductive Medicine of UZ Brussel, Laarbeeklaan 101, 1090 Brussels, Belgium.
22	Gynecological Endocrinology and Reproductive Medicine Division, Obstetrics and Gynecology Department, Cologne University Hospital, Cologne, Germany.
23	Center for Reproduction and Transplantation, Magee-Womens Hospital, University of Pittsburgh Medical Center, 300 Halket Street, Pittsburgh, PA 15213, USA.
24	University of Cincinnati, Department of Obstetrics and Gynecology, Division for REI, Cincinnati, OH 45229, USA. Cincinnati Children's Hospital Medical Center, Division of Pediatric Adolescent Gynecology Pediatric, Cincinnati, OH 45229, USA.
25	Urology Department, UCSF Medical Center, University of California, San Francisco, CA 94143, USA. Obstetrics and Gynecology Department, UCSF Medical Center, University of California, San Francisco, CA 94143, USA.

Table 2: Repro-Can-OPEN Study Questionnaire for Childhood Cancer

Oncofertility Options for Childhood Cancer	Response
Available fertility preservation options for girls with cancer	
Ovarian tissue freezing	?
Oophoropexy in case of pelvic irradiation	?
Oocyte in vitro maturation (IVM) for peripubertal girls	?
Artificial ovary	?
Available fertility preservation options for boys with cancer	
Testicular tissue freezing	?
In vitro spermatogenesis	?
Available fertility preservation options for both girls and boys with cancer	
GnRH analogs in case of peripubertal child	?
Gonadal shielding in case of irradiation	?
Fractionation of chemo- and radiotherapy	?
Neoadjuvant cytoprotective pharmacotherapy	?
Stem cells reproductive technology	?

Each surveyed center is asked to fill in the Repro-Can-OPEN Study questionnaire including questions on the availability of fertility preservation options provided to children with cancer (females and males), and whether these options are always, commonly, occasionally, or rarely used. When a fertility preservation option is available and always used for cancer patients, it is given (Yes +++) that weighs 100 actual points (25 points per each +). When a fertility preservation option is available and commonly used for cancer patients, it is given (Yes ++) that weighs 75 points (25 points per each +). When a fertility preservation option is available but occasionally used for cancer patients, it is given (Yes ++) that weighs 50 points (25 points per each +). When a fertility preservation option is available but rarely used or only used in research settings for cancer patients, it is given (Yes +) that weighs 25 points (25 points per each +). When a fertility preservation option is not available, it is given (No) that weighs 0 points. When the fertility preservation option is not available to cancer patients because it is still in the preclinical research stage, it is marked with (No*). The maximal points of utilization that an oncofertility option might have is 100 when it is available and always used for cancer patients and is given (Yes +++++), (25 points per each +).

Oncofertility Score calculation

The oncofertility score is calculated as a percentile ratio between the total actual points and the total maximal points of utilization that an oncofertility option might have. The total actual points for an oncofertility option equal the sum of actual points for this option in the surveyed centers. The total maximal points for an oncofertility option equal 100 points multiplied by the number of surveyed centers.

$$\text{Oncofertility Score} = \frac{\text{Actual Points (AP) of utilization that an oncofertility option might have}}{\text{Maximal Points (MP) of utilization that an oncofertility option might have}} \%$$

Table 3: Repro-Can-OPEN Study Part I: Oncofertility Options & Scores (%) for Childhood Cancer in 14 surveyed centers in limited resource settings

Oncofertility Center	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total Actual Points	Oncofertility Score (%)
Available fertility preservation options for girls with cancer																
- Ovarian tissue freezing	No	Yes (++)	No	No	Yes (+)	Yes (+)	Yes (+)	Yes (++)	Yes (++)	Yes (++)	Yes (+)	No	No	Yes (++)	350	25
- Oophorectomy in case of pelvic irradiation	Yes (++)	Yes (+++)	No	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (+++)	Yes (++)	Yes (++)	Yes (++)	No	Yes (++)	Yes (++)	650	46.42
- Oocyte in vitro maturation (IVM)	No	No	Yes (+)	No	Yes (++)	Yes (+)	Yes (+)	Yes (++)	Yes (++)	No	Yes (++)	Yes (++)	Yes (++)	Yes (+)	400	28.57
- Artificial ovary	No	No	No	No	Yes (+)	No	No	No	No	No	No	No	No	No	25	1.78
Available fertility preservation options for boys with cancer																
- Testicular tissue freezing	No	No	Yes (++)	No	Yes (+)	No	No	No	No	Yes (++)	No	Yes (++)	Yes (++)	Yes (+)	250	17.85
- In vitro spermatogenesis	No	No	No	No	No	No	No	No	No	No	No	No	No	No	0	0
Available fertility preservation options for both girls and boys with cancer																
- GnRH analogs in case of old child (9-14 year)	No	Yes (++)	No	Yes (++)	Yes (+++)	Yes (+)	Yes (++)	No	Yes (++)	Yes (++)	No	Yes (++)	Yes (++)	Yes (+)	475	33.92
- Gonadal shielding in case of irradiation	Yes (++)	Yes (+++)	Yes (++)	Yes (++)	Yes (+++)	Yes (+++)	Yes (+++)	Yes (++)	Yes (+++)	Yes (+++)	Yes (+++)	Yes (++)	Yes (+++)	Yes (+++)	950	67.85
- Fractionation of chemo- and radiotherapy	Yes (+++)	Yes (+++)	Yes (+++)	Yes (++)	Yes (+++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (+++)	No	Yes (+++)	Yes (+++)	Yes (+++)	850	60.71
- Neoadjuvant cytoprotective pharmacotherapy	No	No	No	No	No	No	No	No	No	No	No	No	Yes (++)	No	50	3.57
- Stem cells	No	No	No	No	No	No	No	No	No	No	No	No	Yes (+)	No	25	1.78

(+++ Available and always used for cancer patients, (++) Available and commonly used for cancer patients, (++) Available but occasionally used for cancer patients, (+) Available but rarely used or only used in research setting for cancer patients, (No) Not available, (No*) Not available because it is still in the preclinical research stage.

Table 4: Repro-Can-OPEN Study Part II: Oncofertility options & scores (%) for Childhood Cancer in 25 surveyed centers in optimum resource settings

Oncofertility Center	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Total Actual Points	Oncofertility Score (%)		
Available fertility preservation options for girls with cancer																													
- Ovarian tissue freezing	Yes (++)	Yes (+)	Yes (++)	Yes (++)	Yes (+++)	Yes (++)	Yes (++)	No	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	No	Yes (++)	Yes (++)	Yes (++)	No	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	1575	63
- Oophorectomy in case of pelvic irradiation	Yes (++)	Yes (++)	Yes (++)	No	Yes (++)	Yes (+)	Yes (+)	Yes (++)	Yes (++)	Yes (++)	No	Yes (++)	Yes (++)	No	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	1050	42
- Oocyte in vitro maturation (IVM)	No	No	Yes (+)	Yes (++)	No	Yes (+)	No	No	Yes (+)	Yes (+)	No	No	No	No	Yes (++)	Yes (++)	No	Yes (+)	Yes (+)	Yes (++)	Yes (+)	No	No	No	Yes (+)	450	18		
- Artificial ovary	No*	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No*	No	No	No	Yes (+)	Yes (+)	No	No	50	2		
Available fertility preservation options for boys with cancer																													
- Testicular tissue freezing	Yes (++)	Yes (+)	Yes (+)	No	No	Yes (++)	Yes (++)	No	No	Yes (+)	Yes (++)	Yes (+)	Yes (++)	No	Yes (+)	Yes (++)	Yes (++)	Yes (+)	Yes (++)	No	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (+)	1025	41	
- In vitro spermatogenesis	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No*	No	Yes (+)	No	Yes (+)	No	No	50	2		
Available fertility preservation options for both girls and boys with cancer																													
- GnRH analogs in case of old child (9-14 year)	Yes (++)	Yes (++)	No	No	Yes (++)	No	Yes (++)	Yes (++)	Yes (++)	Yes (++)	No	Yes (++)	Yes (+)	Yes (+)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	No	No	No	No	Yes (+)	No	Yes (++)	875	35		
- Gonadal shielding in case of irradiation	Yes (+)	Yes (++)	Yes (++)	Yes (+)	Yes (++)	Yes (++)	No	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (+)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	1725	69	
- Fractionation of chemo- and radiotherapy	Yes (++)	Yes (++)	Yes (++)	No	No	Yes (++)	No	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	Yes (++)	1525	61	
- Neoadjuvant cytoprotective pharmacotherapy	No	No	No	No	No	No	No	No	Yes (+)	No	No	No	Yes (+)	No	No	Yes (+)	Yes (++)	No	No	No	No	No	No	Yes (+)	No	No	150	6	
- Stem cells reproductive technology	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No*	No	No	0	0		

(+++ Available and always used for cancer patients, (++) Available and commonly used for cancer patients, (++) Available but occasionally used for cancer patients, (+) Available but rarely used or only used in research setting for cancer patients, (No) Not available, (No*) Not available because it is still in the preclinical research stage.