Oncofertility Global Partners Meeting

Establishing Critical Connections Around the World and Generating High-Impact Products: Updates from 2016-2017 and Next Steps

Tuesday, November 14
Oncofertility Conference 2017
Chicago, IL
Welcome to the 2017 Oncofertility Conference!

- Tunisia
- Argentina
- Japan
- Brazil
- Nigeria
- Peru
- China
- Mexico
- India
- Belgium
- Korea
- Canada
- United States
- Thailand
- Australia
- Indonesia
- Uruguay
Today’s Agenda

- 9:00—9:20am  Welcome! Growth and Accomplishments in 2016-2017—Dr. Teresa K. Woodruff, Northwestern University

- 9:20—10:05am  Breaking barriers on fertility preservation: Expanding forces around the globe focusing on Latin American countries—Dr. Jhenifer Rodrigues, In Vitro Clinical Embriology and Consultancy and Federal University of Minas Gerais

- 10:05—10:20am  Oncofertility in China—Megan Kopp, University of South Carolina

- 10:20—11:00am  Multimodal cultural competence development tools for oncofertility—Dr. Yuriko Iwahata, Visiting Scholar, Northwestern University

- 11:00—11:30am  Transition to Oncofertility Professional Engagement Network (OPEN): Next Steps and 2017-2018 Goals—Dr. Teresa K. Woodruff
Fertility Preservation Decisions are Complex

Challenges of making the decision

- Existential crisis about self, survival, and future
- Decision peripheral to primary diagnosis
- Time constraints
- Overwhelming array of options
- Access to care
- Financial constraints

Challenges of navigating the decision

- Sex
- Age
- Diagnosis
- Treatment type
- Stage of treatment
- Baseline fertility

Preserving the reproductive function and future of those in need requires increased GLOBAL awareness and understanding.
Global Impact in 2017

The 2017 Breakdown

The Global Partners Network now consists of 35 member countries, many of which are located in areas with low or no resources. In 2017, 7 new members were added and three papers published.
Building Core Competency in Developing Countries: Experience from Egypt, Tunisia, Brazil, Peru, and Panama. Salama, Ataman, et al. In revision.
Welcome to New Partners
Global Engagement

- Virtual Grand Rounds from Brazil, Japan, Portugal
- Papers in Australia
- BOR Commentary
- Meetings in Japan, Australia, Peru, China, India
- Reviews from Japan
- Portuguese Oncology Recommendations
- Survey Study
- Resources in Spanish, French, and Turkish
- Developing Countries Publication
- Latin America Oncofertility Network
Authoritative Oncofertility Resources
Breaking barriers on fertility preservation: Expanding forces around the globe focusing on Latin American countries

Dr. Jhenifer Kliemchen Rodrigues, PhD
Cancer and life after cancer

Before
Concern about disease

Nowadays
Concern about quality of life
Fertility preservation

Life maintenance
Quality of life
Procreation
What is Oncofertility?

Interdisciplinary area that involves Oncology and Reproductive Medicine, which aims to expand the options for fertility preservation for cancer patients.

Oncofertility = Oncology + Fertility

- **Oncology**: Study of cancer
  - Clinical
  - Research

- **Fertility**: Capacity to produce offspring
  - Clinical
  - Research

= ONCOFERTILITY

Balancing life-preserving treatments with fertility-preserving options
Individual roles

Group roles

Organized system of cooperation and action

Partnerships

Ideas, tools, actions...

Individual roles
Dr. Woodruff is the Thomas J. Watkins Professor of Obstetrics and Gynecology at the Feinberg School of Medicine at Northwestern University. She coined the term oncofertility to describe a new discipline that bridges oncology and reproductive medicine in order to discover and apply new fertility preservation options for young patients with fertility-threatening diseases or treatments. Dr. Woodruff is also Chief of the Division of Fertility Preservation and Director of the Women's Health Research Institute at Northwestern University. 

11 years ago ...
Chicago/IL, United States
50 sites – United States
• April, 12th, 2013: 1º Simpósio da Rede Brasileira de Oncofertilidade Talk of Dr. Teresa Woodruff, to oncologists, urologists, gynecologists and students.

• April, 11th: 1º Official meeting of members of the BOC
Global Oncofertility Network

Dr. Teresa K. Woodruff, PhD
USA and Global Oncofertility Network
Global Oncofertility Partners Meeting

2013

2014

2015
Low resource setting

GAPS
- Information
- Education
- Options available
- Research
- Cultural issues
the Oncofertility Consortium
LATIN AMERICA ONCOFERTILITY NETWORK
Members – Latin America Oncofertility Network

Brazil: 38 (ART Clinics and/or Research Institutes) + 1 Cancer clinic + 1 ONG
Peru: 2
Chile: 1
Argentina: 1
Panama: 1
Porto Rico: 1
Mexico: 1
Uruguay: 1

2013 – The start
6 centers
Oncofertility

- Mistake: Offer fertility preservation and think that has an Oncofertility Program

- Oncofertility Program IS DIFERENT than only offer fertility preservation options

- Service flowchart
- Psychologist
- Patient navigator (Nursing)
- Know how about techniques
- Partnerships with oncologists
WHAT OPTIONS DO WE OFFER FOR FERTILITY PRESERVATION IN LATIN AMERICA?
Women
Embryo cryopreservation

Advantages
- Technique already established;

Disadvantages
- You need to have partner;
- Requires hormonal stimulation;
- Time: It takes on average 15 days to be carried out;
- It can be performed in children and young people.
- Ethical / religious involved, related to the freezing of the excessive number of embryos.
- Survival rate: 92.52%
- Ongoing pregnancy rate: 43.7%

- Approximately 20 oocytes are necessary to achieve a pregnancy.
- Live birth rate/vitrified oocyte: 5-7% Egg donation programs

Results can not be extrapolated for cancer patients.

Donnez e Dolmans, 2015
Oocyte cryopreservation

**Advantages**
- No need for partner;
- Technique already established (similar to fresh results);
- It can be performed in younger;
- No involvement of ethical / religious issues, it does not involve the freezing of embryos, gametes only.

**Disadvantages**
- Requires hormonal stimulation;
- Time: It takes on average 15 days to be carried out;
- It can be performed in children.
Oocyte cryopreservation

Brazil: 36 centers performs the method
Peru: 1
Chile: 1
Argentina: 1
Panama: 1
Porto Rico: 1
Mexico: 1
Uruguay: 1

live births reported – cancer patients
Live birth after 6 years of oocyte vitrification in a survivor with breast cancer

Eduardo Leme Alves da Motta · Monique Bonavita · José Roberto Alegretti · Maurício Chehin · Paulo Serafini

Received: 9 May 2014 / Accepted: 1 August 2014 / Published online: 22 August 2014
© Springer Science+Business Media New York 2014
Ovarian tissue cryopreservation

**Advantages**

- You do not need to have partner / sperm collection;
- No need for prior hormonal stimulation;
- Time: It takes on average two days to be performed;
- It can be performed in children (prepubertal) or young;
- Preservation of more oocytes;
- No involvement of ethical / religious issues;
- Function can reverse hormone
- in vitro follicle maturation possibility.

_Poirot et al., 2002; Dolmans et al., 2013_

**Disadvantages**

- Technical not established still considered experimental;
- oncologic pathology recurrence risk;
- tissue ischemia risk after reimplantation;
- It is a surgical procedure to tissue removal and the other for reimplantation.

_Varghese et al., 2008; Dolmans et al., 2013_
The slow freezing has been effective in the preservation of ovarian tissue.

Sánchez et al., 2007

The glazing has been used successfully in ovarian tissue with minimal changes in tissue morphology.

Tao & Del Valle, 2008

? NO consensus!

Kim, 2010
Situação atual

86 live births and 9 ongoing pregnancies!

(84 slow freezing and 2 vitrification)

(Demeestere et al., 2010; Donnez et al., 2011a; Donnez et al., 2011b; Revel et al., 2011; Silber 2012; Dolmans et al., 2013, Sttop et a., 2014; Donnez e Dolmans, 2015; jensen et al., 2016)
FERTILITY PRESERVATION

86 successful births and 9 ongoing pregnancies worldwide in women transplanted with frozen-thawed ovarian tissue: focus on birth and perinatal outcome in 40 of these children

Annette Klüver Jensen¹ · Kirsten Tryde Macklon² · Jens Fedder³ · Erik Ernst⁴ · Peter Humaidan⁵ · Claus Yding Andersen¹

Received: 8 September 2016 / Accepted: 14 November 2016
Ovarian cortex transplantation: time to move on from experimental studies to open clinical application

LIVE BIRTH RATE AFTER OTC AND REIMPLANTATION IN A SERIES OF 111 WOMEN

TABLE 1

<table>
<thead>
<tr>
<th>Team</th>
<th>Transplanted women</th>
<th>Women who conceived (%)</th>
<th>Women who gave birth</th>
<th>Live births (ongoing pregnancies)</th>
<th>Miscarriages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donnez and Dolmans' team</td>
<td>19</td>
<td>7</td>
<td>5</td>
<td>8(^{(+1)^{a,b}})</td>
<td>1</td>
</tr>
<tr>
<td>Andersen's team</td>
<td>25</td>
<td>8</td>
<td>6</td>
<td>8(^{b})</td>
<td>2</td>
</tr>
<tr>
<td>Pellicer's team</td>
<td>33</td>
<td>8</td>
<td>4</td>
<td>6(^{a,c} (+3))</td>
<td>3</td>
</tr>
<tr>
<td>Dittrich's team</td>
<td>20</td>
<td>7</td>
<td>6</td>
<td>8(^{a})</td>
<td>1</td>
</tr>
<tr>
<td>Rozen's team</td>
<td>14</td>
<td>2</td>
<td>2</td>
<td>3(^{c})</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>111</td>
<td>32((29))</td>
<td>23</td>
<td>33((+4))</td>
<td>7</td>
</tr>
</tbody>
</table>

Note: Data from references 2, 3, 4, and 7. Values are number, except where noted.

- \(^{a}\) One woman delivered twice.
- \(^{b}\) One woman delivered three times.
- \(^{c}\) One twin delivery.

Ovarian tissue cryopreservation

Brazil: 5 centers that performs the method
Peru: 2
Chile: 1
Argentina: 0
Panama: 0
Porto Rico: 0
Mexico: 0
Uruguay: 0

1 transplantation (Good FSH for 3 months)
No live births reported yet

Training and knowledge – Europe (Eg: Claus Andersen) and USA (Eg. Mary Zelinksi)
Cryopreservation technique
Transplantation technique
Comparison between Slow Freezing and Vitrification in Terms of Ovarian Tissue Viability in a Bovine Model

Comparação da viabilidade do tecido ovariano após congelamento lento e vitrificação em modelo bovino

Ana Luisa Menezes Campos¹, Janaina de Souza Guedes¹, Jhenifer Klienchem Rodrigues², Walter Antônio Prata Pace¹, Renato Rinco Fontoura³, João Pedro Junqueira Caetano⁴, Ricardo Mello Marinho¹

To cite this article:

Published in Volume: 12 Issue 5: October 23, 2014
Ovarian tissue cryopreservation

+ Puncture of small follicles (~ 5 mm),
  followed by in vitro oocyte maturation

+ Ex vivo oocyte collection and in vitro oocyte maturation

Donnez and Dolmans, 2015
Semen quality of 4480 young cancer and systemic disease patients: baseline data and clinical considerations

Jacques Auger¹,², Nathalie Sermondade³ and Florence Eustache³,²
Abstract

**Background:** Except for testicular cancer and Hodgkin's disease, baseline data on semen quality in case of cancers as well as systemic pathologies of the young adult are scarce or based on low sample size.

**Methods:** Semen quality in patients having testicular cancer (TGCT, n = 2315), Hodgkin's disease (HD, n = 1175), non-Hodgkin's lymphoma (NHL, n = 439), leukemia (L, n = 360), sarcoma (S, n = 208), brain tumour (BT, n = 40), Behcet's disease (Behcet's, n = 68) or multiple sclerosis (MS, n = 73) was studied and compared to that of 1448 fertile men candidates for sperm donation (CSD) and 208 partners of pregnant women (PPW). All samples were studied following the same methodology in a single laboratory. Post freezing and thawing semen characteristics were also studied.

**Results:** The percentage of normozoospermic men was only 37 % for L patients and lower than 60 % for TGCT, NHL, S and BT. The level of sperm production was differently decreased according to pathologies, the median total sperm count in TC and L patients being four times lower (p < 0.01 when compared to CSD and PPW). The lowest percentage of progressively motile spermatozoa was found for L and BT patients (both, p < 0.01 compared to CSD and PPW). The percentage of morphologically normal spermatozoa was also reduced in cancer patients, especially in BT patients. Progressive motility after thawing in patients was about half that observed among candidates for sperm donation. In almost half of the semen of patients with testicular cancer or leukemia, the total number of motile spermatozoa per straw was less than 0.5 x 10^6 compared to 4.3 x 10^6 in CSD.

**Conclusions:** The present data confirm on large series the deleterious impact of various cancers of the young adult on semen quality, establishing thus baseline data for future studies. Owing to the post-thaw quality of the frozen straws, future fertility projects for the majority of the patients studied (in case there is no post-treatment recovery of spermatogenesis) should necessitate an ICSI to provide the best chance of paternity whatever the fertility check-up in the female partner.

**Keywords:** Cancer, Systemic disease, Semen quality, Sperm cryopreservation, Sperm banking, Assisted reproductive technologies
Cryopreservation of individually selected sperm: methodology and case report of a clinical pregnancy

Nina Desai · Jeffrey Goldberg · Cynthia Austin · Edmund Sabanegh · Tommaso Falcone

Review Article
Human Sperm Cryopreservation: Update on Techniques, Effect on DNA Integrity, and Implications for ART

Marlea Di Santo, Nicoletta Tarozzi, Marco Nadalini, and Andrea Borini

Tecnobios Procreazione, Centre for Reproductive Health, Via Durate 15, 40125 Bologna, Italy
Correspondence should be addressed to Marlea Di Santo, disanto@tecnobiosprocreazione.it
Received 5 August 2011; Revised 22 September 2011; Accepted 27 September 2011
Academic Editor: James A. Brown
ONGOING

ONGOING
Goals

- Partnership with Cancer treatment centers: solid connection to oncologists;

- Partnership with Cancer National Societies;

- Partnership with big (National) and small (Regional) cancer patient care non-profit association (Eg: GRAACC—Childhood cancer; Capec, etc)

- To build a standardized guideline for oncofertility program implementation and use of the cryopreservation methods;

- Post-doc: Federal University of Minas Gerais — Clinical Hospital (Public service)
  To implement an oncofertility program (connection between fertility specialist, oncologist and psychologist in the hospital).

- Specific tools for Latin America countries
  (Website and books – 1st steps)
Some of other achievements of our network, also supported by the Oncofertility Consortium were:

• Publication of the professional book on Oncofertility - preservation of fertility in cancer patients, published in 2015 in Brazil and in Portuguese language;
• Publication of many scientific articles in Brazilian scientific magazines, and also international scientific journals through partnerships between Brazil and Latin-American countries, and members of the Global Oncofertility Network;
• Partnerships with non-profit or non-governmental organizations in Brazil, as ABRALE (Brazilian Association of Lymphoma and Leukemia) and GRAAC (Support Group for Adolescent and Child with Cancer);
• Association with Cancer Treatment Institutions in Brazil, as AC Camargo Hospital São Paulo / SP and others are emerging;
• Specialization in cryopreservation and transplantation of ovarian tissue, through joint projects and technical visits in American and European centers (Brazil, Chile);
• Development of a project to help cancer patients to preserve their gametes using the public health system (in progress – Brazil and Chile);
PARTNERSHIP
Preservação da Fertilidade: Uma Nova Fronteira em Medicina Reprodutiva e Oncologia

Editores:
Ricardo Mello Marinho
Ana Carolina Japur de Sá Rosa e Silva
João Pedro Junqueira Caetano
Jhenifer Kliemchen Rodrigues

Creating a Global Community of Practice for Oncofertility

Fertility preservation in the cancer setting, known as oncofertility, is a field that requires close cooperation between physicians, basic scientists, clinical researchers, ethicists, lawyers, educators, and policy makers. The Oncofertility Consortium (OC) was founded to be a scientific, altruistic resource, both intellectual and monetary, for building this new field of practice capable of meeting the needs of young patients with cancer. The OC has expanded its attention to include other normal threat fertility, and the work of the OC now extends across the globe, involving partners who communicate to share efforts, resources, and improve the quality of oncofertility research and practice. Here we review the global oncofertility capacity building activities that strengthen these research and clinical programs, ultimately improving care and offering hope to cancer patients.

Lauren M. Atterman
Jennifer K. Rodrigues
Ricardo M. Marnau
João P.J. Caetano
Mauricio B. Cheinha
Eduardo L. Alves da Matta
Paulo Seraphim
Nao Saotome

ABSTRACT

Malignant and cardiovascular diseases are the main causes of death in Brazil. Women of reproductive age and their partners are exposed to these diseases, and the risk of developing one of these conditions is higher in women with breast cancer. The use of chemotherapy and radiotherapy can cause permanent infertility and decrease the chances of pregnancy. In addition, the occurrence of adverse events during pregnancy can increase the risk of maternal and fetal mortality. The implementation of fertility preservation techniques can help to prevent the loss of reproductive potential in women with cancer.

Introduction

In Brazil, the incidence of breast cancer is increasing, and the survival rate is also improving. However, the quality of life of breast cancer survivors is affected by the side effects of chemotherapy and radiotherapy. The implementation of fertility preservation techniques can help to prevent the loss of reproductive potential in women with breast cancer.

Methods

The study was conducted at the University of São Paulo, Brazil, and the Institutional Review Board approved the protocol. The researchers aimed to assess the feasibility of implementing fertility preservation techniques in breast cancer patients in Brazil.

Results

The implementation of fertility preservation techniques in breast cancer patients in Brazil is feasible and can improve the quality of life of these patients. The results are encouraging, and further studies are needed to evaluate the effectiveness of these techniques.

Discussion

The implementation of fertility preservation techniques in breast cancer patients in Brazil is feasible and can improve the quality of life of these patients. Further studies are needed to evaluate the effectiveness of these techniques and to establish guidelines for their implementation in clinical practice.

Conclusion

The implementation of fertility preservation techniques in breast cancer patients in Brazil is feasible and can improve the quality of life of these patients. Further studies are needed to evaluate the effectiveness of these techniques and to establish guidelines for their implementation in clinical practice.
Experimento amadurece óvulos em laboratório

Resultados oferecem avanços importantes às tecnologias de reprodução humana, como preservar fertilidade feminina em casos de câncer.

A avanço tecnologia de reprodução assistida torna mais próxima a realidade de pacientes com câncer engravidarem após cura da doença. A resposta positiva veio de pesquisas da cientista brasileira Jhenifer Klimek Leal Rodrigues realizadas nos Laboratórios do Oregon National Primate Research Center dos Estados Unidos, com cultivo in vitro de folículos ovarianos ainda em estágio inicial de desenvolvimento.

Especialistas avançam em técnica de preservação da fertilidade de pacientes com câncer

Clínica mineira de reprodução assistida e centros internacionais de pesquisa avançam em técnica de maturação de óvulos em laboratório para uso em pacientes com câncer

Carolina Cotta - Estado de Minas
Publicação: 21/09/2014 19:58

O mundo da maternidade, o diagnóstico precoce e os avanços no tratamento de alguns tipos de câncer contribuíram para que um número cada vez maior de pacientes em fase reprodutiva sofram diagnosticados com a doença. Nesse contexto, que a relativa nova oncobiologia, que envolve a medicina reprodutiva e a oncología, vem avançado em técnicas que permitem a essas pacientes serem mãe, mesmo antes de se curarem. O tratamento - com quimioterapia e/ou radioterapia - pode levar a quadros de subfertilidade ou infertilidade, transitórios ou permanentes.

Usar as esperanças vem de Minas. A Rede Pró-Criar medicina Reprodutiva - em parceria com a...
Novas possibilidades de gravidez pós-câncer

Estudo de cientista mineiro propõe cultivo de folículos ovarianos em laboratório, adicionando a eles hormônios masculinos, que melhorarão ter o papel importante na maturação folículos. Técnica pode ser alternativa para mulheres que queiram engravidar depois de terem tumor.

Bióloga conduz pesquisas que buscam preservar a fertilidade em pacientes com câncer

Basta, Louise Brown parece uma Inglesa, 36 anos, casada e mãe. Seu nascimento, porém, peculiaridade: Louise foi a nascer por meio da fertilização técnica desenvolvida em 1978 por Robert Edwards e pelo médico.

Primeiras experiências com o laboratório de óvulos de Louise Brown não eram de iniciadas em experimentos com ratos e primatas, mas quase oito décadas de evolução em um cão de velocidade conseguido. Basta dizer que o processo de desenvolvimento de um câncer é uma vida em um laboratório.

A bióloga Jhenifer Rodrigues atua com HIV há três anos e há nove no campo da pesquisa.

Os trabalhos são desenvolvidos em parceria da Blu Cia Tech com a Biofertilizantes.
Project with colleagues/Anvisa

CFM
(Brazilian Federal Council of Medicine)
Oncofertility Commitee of the Brazilian Society of Human Reproduction (SBRH)

Entire structure of the SBRH as the national and regional congresses, the scientific journal, newsletters and regional delegates to disseminate information on oncofertility.

**GOALS:**

- To promote scientific activities in oncofertility
- To disseminate scientific information, medical and laboratory protocols to SBRH members
- To promote integration between specialists in Reproductive Medicine, Oncologists, Mastologists, Urologists, Hematologists, Embryologists, Psychologists and Nurses involved with Oncofertility
- To provide information of oncofertility issues for patients and the general public
Online Surveys – Brazil and Latin America

Put data together about:
- number of cancer patients that ask for information and/or go under the procedure for fertility preservation;
- number of centers that has an Oncofertility program well implemented;
- Type of protocols used;
Psychology Project – PSYCHO-ONCOLOGY

LOCAL PROJECT – Minas Gerais, Brazil
Dr. Patrícia Paula Santos, psychologist
Dr. Roberta Lobato, psychologist

Individual therapy  Group therapy

Partnership with Cancer treatment clinics

ONCOFERTILITY

Psychologists work on the context of Oncofertility in therapies
Leadership - Peru

Dr. Flor Sanchez, PhD
Dr. Sergio Romero, PhD

Dr. Joahn Smitz, PhD
Brussels, Belgium

SUPO
Centro de estudios en Biología y medicina Reproductiva (Peru):

Sergio Romero, PhD (Research embryologist, former member of the Oncofertility team in Brussels)

Flor Sánchez, PhD (Research embryologist, former member of the Oncofertility team in Brussels)

Johan Smitz MD, PhD (Researcher, Professor at Brussels Free University and team leader of the Brussels Oncofertility program)
BIOMER aims to promote and lead the Peruvian Oncofertility initiative

- Discussions have started at the governmental level
- Ministry of health ↔ National Cancer program (Plan Esperanza).

As part of the initiative, The Peruvian Oncofertility program:

- Will congregate multidisciplinary professionals.
- Will gather together Academic and clinical partners.
- Will promote research and clinical training.
Phase 1:
First half:
- Project design
- Implementation of reference center
- Links to relevant entities
- Communication plan for Oncofertility National Program

Second half:
- Set-up of clinical and lab protocols and techniques
- Research activities
- Build the multidisciplinary Oncofertility expert team
- Program advertisement
- Dry tests

Phase 2:
- Initiation of activities
  (Fertility preservation)
- Training of new personnel
- Research activities
- Academic activities

Phase 3:
- Fertility Restoration
- Training of new personnel
- Research activities
- Academic activities

Proposed Organogram for developmental phases of the National Oncofertility Program - Peru
Foi realizado na cidade de Lima, Peru de 14 a 16 de Abril de 2016, o evento, "VIII International Campus course: Updates on ART in the Andean Region Focus on Fertility preservation", organizado por Johan Smitz, PhD (UZBRUSSEL/VUB - Bélgica), Sergio Romero, PhD (CEFRA/BIOMER) e Flor Sánchez, PhD (BIOMER) - Peru.

A reunião contou com palestras, cursos práticos e simpósios sobre tópicos em Reprodução e Preservação da Fertilidade, direcionados a embriologistas, biólogos, tecnólogos, médicos ginecologistas, oncologistas, enfermeiros, psicólogos, e estudantes ligados a áreas de Reprodução Assistida.

Dentre os especialistas que estiveram presentes e apresentaram palestras e cursos os organizadores Johan Smitz (BE), and Flor Sánchez (PE), e os palestrantes convidados Carlos Planhca (PT), Bruce Murphy (CA), Jhenifer Klsamchen (BR), José Ricardo de Figueiredo (BR), Sandro Gerli (IT), Escudero (PE), Ricardo Pella (PE), Jimmy Portella (PE), e...
Laboratorio de Investigación en
Biología Reproductiva y Preservación de la
Fertilidad

INVESTIGACIÓN BÁSICA Y TRASLACIONAL EN BIOLOGÍA
REPRODUCTIVA Y ONCOFERTILIDAD
Discussing Oncofertility in Uruguay and the Start of a New Local Network | The Oncofertility...

On June 20th, representatives from the Latin America Oncofertility Global Partners Network met with other reproductive medicine specialists and oncologists at

Dr. Dana Kimelman, MD
Leadership - Uruguay
Actions - Chile

Dr. Anibal Scarella, MD
Leadership - Chile
Título: Preservación de la Fertilidad en la paciente Oncológica.

Título abreviado: Preservación de la Fertilidad

Autores: Anibal Scarella Chamy\textsuperscript{1}, Cesar Díaz García\textsuperscript{2}, Sonia Herraiz\textsuperscript{2}, Jhenifer Rodrigues\textsuperscript{3}

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Revisión clínica

Preservación de la fertilidad en la paciente oncológica
Fertility preservation in the oncology patient

Autores: Anibal Scarella Chamy\textsuperscript{1,2}, César Díaz-García\textsuperscript{3,4,5}, Sonia Herraiz\textsuperscript{2}, Jhenifer Kliemchen Rodrigues\textsuperscript{7,8,9}

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Accepted for publication !!
Organized system of cooperation and action

Group roles

Partnerships

Individual roles

Ideas, tools, actions...
Poster to be presented at the 2017 Oncofertility Consortium meeting about one action from Brazil in partnership with Uruguay

**BREAKING BARRIERS ON FERTILITY PRESERVATION: EXPANDING FORCES AROUND THE GLOBE FOCUSING ON LATIN AMERICAN COUNTRIES**

Dana Kimelman MD\(^1,5\), Jhenifer K. Rodrigues PhD\(^2,3,4,5\), Lauren Ataman MPPA\(^1,5\), Teresa K. Woodruff PhD\(^1,5\)

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\(^5\)Global Oncofertility Consortium Network
Oncofertility in China

Megan Kopp
Shuo Xiao, PhD
Department of Environmental Health Sciences
Arnold School of Public Health, University of South Carolina
Oncofertility Annual Meeting, November 14th, Chicago
Cancer facts in China

• China has the largest population in the world: 1.4 billion and 20% of world’s population;
• There are 4.3 million newly diagnosed cancer cases in 2015 (12,000 per day);
• 9.5% (0.4 million) of new cancer cases are younger than 45 years of age and are within or before reproductive age.

http://www.who.int/mediacentre/factsheets/fs297/en/
There were 184,900 new female breast cancer cases in 2015, accounting for 19.32% of all new cancer cases; Although the females with the highest risk of breast cancer development are between 55-60 years of age or older, there is a significant population of them that are younger than 45 because of the higher survival rate.

Oncofertility challenges in China

- China has the most new cancer cases worldwide and it is expected to be 50% in 2030;
- China has the second largest population of cancer survivors in the world which will become the largest in the near future;
- The largest developing country, the environment, the economy, and the life styles are experiencing dramatic changes now;
- Around 10% of couples have difficulties obtaining natural pregnancy which could be caused by multiple factors such as environmental pollution and stress;
- China ended the One-child policy in 2015 and more women at the late stages of reproductive age are planning to have a second child;
- Oocyte cryopreservation is not available for unmarried women and is restricted for married women;

http://www.who.int/mediacentre/factsheets/fs297/en/
Oncofertility in China

• In the Fall of 2017, the first Oncofertility research center was established in Xiamen University The First Affiliated Hospital.
• Now, ovarian tissues from three patients with cervical cancers have been cryopreserved by vitrification;
• Qualities of tissue transport, processing, and vitrification are being tested.

Xiao et al unpublished
Fertility preservation and Oncofertility are new worlds for clinicians, cancer patients, and general public in China. We therefore designed questionnaires to assess the Oncofertility knowledge targeting different populations.
A Pilot Study to Assess Oncofertility Knowledge in Obstetricians and Gynecologists in Fujian, China

The questionnaire includes 21 questions regarding their practices and demographics and 12 questions assessing their background knowledge;

The questionnaire was translated to Mandarin and distributed via WeChat, a Chinese social media platform, to OB/GYN’s throughout the Fujian province of China.
A Pilot Study to Assess Oncofertility Knowledge in Obstetricians and Gynecologists in Fujian, China

- There are 195 OB/GYN’s submitted the survey;
- Participants have different backgrounds on gender, age, marriage status, and education levels, years of working experiences, and hospital levels.
A Pilot Study to Assess Oncofertility Knowledge in Obstetricians and Gynecologists in Fujian, China

- Can chemotherapy and/or radiation damage female patients' reproductive functions?
  - Yes: 98.44%
  - No: 1.56%

- Have you heard of fertility preservation?
  - Yes: 80.73%
  - No: 19.27%

- Have you had patients consult with you about infertility?
  - Yes: 95.83%
  - No: 4.17%

- A majority of the participants know that anti-cancer treatments can damage patients’ fertility, have heard of fertility preservation, and had patients consult with for infertility.
A Pilot Study to Assess Oncofertility Knowledge in Obstetricians and Gynecologists in Fujian, China

- Does your hospital provide fertility preservation for female cancer patients?
  - Yes: 60.42%
  - No: 20.31%
  - No Answer: 19.27%

- Have you had an oncologist consult with you about patients’ fertility?
  - Yes: 47.40%
  - No: 52.60%

- Do you want to collaborate with oncologists on protecting and preserving patients’ fertility?
  - Yes: 92.71%
  - No: 7.29%

- Surgery methods for gynecological cancers

- A majority of the participants realize the importance of fertility preservation and are willing to help patients for preserving their fertility;
- However, the resources for fertility preservation is limited.
A Pilot Study to Assess Oncofertility Knowledge in Obstetricians and Gynecologists in Fujian, China

True/False questions utilized to assess fertility preservation knowledge:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>All cancer treatments result in infertility or premature menopause.</td>
<td>False</td>
</tr>
<tr>
<td>2</td>
<td>A patient must have a spouse in order to pursue fertility preservation treatment.</td>
<td>False</td>
</tr>
<tr>
<td>3</td>
<td>All fertility preservation treatments have similar success rates at achieving pregnancy.</td>
<td>False</td>
</tr>
<tr>
<td>4</td>
<td>Insurance usually covers fertility preservation treatments.</td>
<td>False</td>
</tr>
<tr>
<td>5</td>
<td>Fertility preservation methods are the same before and after cancer treatment.</td>
<td>False</td>
</tr>
<tr>
<td>6</td>
<td>Women who utilize fertility preservation methods increase their risk of cancer recurrence in the future.</td>
<td>False</td>
</tr>
<tr>
<td>7</td>
<td>Egg freezing and embryo freezing have the same chances of future pregnancy.</td>
<td>False</td>
</tr>
<tr>
<td>8</td>
<td>A woman who freezes her eggs will have access to them whenever she is ready to use them in the future.</td>
<td>True</td>
</tr>
<tr>
<td>9</td>
<td>Future pregnancy is guaranteed with frozen eggs.</td>
<td>False</td>
</tr>
<tr>
<td>10</td>
<td>Future pregnancy is guaranteed with frozen embryos.</td>
<td>False</td>
</tr>
<tr>
<td>11</td>
<td>IVF with embryo freezing is a treatment used in patients without a cancer.</td>
<td>True</td>
</tr>
<tr>
<td>12</td>
<td>The risk of birth defects in future children increases with chemotherapy treatments.</td>
<td>False</td>
</tr>
</tbody>
</table>

- Each response for question 22 was scored based off of accuracy and the average score was 72.1.
A Pilot Study to Assess Oncofertility Knowledge in Obstetricians and Gynecologists in Fujian, China

Scores increased along with the educational levels:
- P.H.D.
- Master's Degree
- Bachelor's Degree
- ≤Undergraduate Education

OB/GYN's with the greatest years of experience received the lowest scores:
- 1-10 years
- 11-20 years
- 21-30 years
- >30 years

- Education levels and years of the working experience affect the Oncofertility/fertility preservation knowledge.
Summary

- This pilot study indicates that OB/GYN doctors in Fujian, China are willing to help cancer patients preserve and/or protect their fertility and the Oncofertility awareness and knowledge varies in participants with different background (Poster 45).
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Rong Jiao, MD

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Fudan University
School of Public Health
Dr. Weiwei Zheng’s research team
Multimodal cultural competence development tools for oncofertility

November 14

Yuriko Iwahata M.D.

Northwestern University, Woodruff Lab
Self-Introduction

• Yuriko Iwahata, M.D.
• Graduated from St. Marianna University of Medicine in Japan
• Finished 2 years of residency in Japan
• Joined Woodruff lab in this April, 2017
Outline

- To understand the need for cultural competence in oncofertility

- To define cultural competence in oncofertility

- To understand the process of becoming a more culturally competent clinician

- To learn tools and techniques that help achieve cultural competence
What is cultural competence?

• How do we take all the materials that people are making and allow for them to be translated into a community, not only in language?

• How can they be useful in each different country?
What is cultural competence?

- How do we take all the materials that people are making and allow for them to be translated into a community, not only in language?
- How can they be useful in each different country?

“What would be some framing rules that we could use and how can we work together toward that?”
The barriers to cultural competence

• Individual person: The way that the science done is individualized.

• Individual places: The science is done in the individual location

• Structure of science is through publication rather than conversion model where we all contribute
The barriers to cultural competence

• Individual person: The way that the science is done is individualized.

• Individual place: The science is done in the individual location.

• Structure of science is through publication rather than conversion model where we all contribute.

I will publish here but how do you take that up?
Developing human resources of nurses for Oncofertility

This Slide is given by Dr. Nao Suzuki, St. Marianna University, Japan
Clinical Question 2

What kind of fertility preservation recommended for cancer patients who really want to have a baby in the future?

1. Oocyte cryopreservation (grade B)
2. Embryo cryopreservation (Grade B)
3. Ovarian tissue cryopreservation (Grade C1: experimental procedure)
What does cultural competence do?
What does cultural competence do?

Cultural competence increases the rate, the speed at which you can have transferance.
What does cultural competence do?

Cultural competence increases the rate, the speed at which you can have transferance.

How do we take the materials from other countries and be able to use them around the globe?

“The speed of uptake”
What does the global community have?

Survey of Third-Party Parenting Options Associated With Fertility Preservation Available to Patients With Cancer Around the Globe

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Teresa K. Woodruff

How do we go from existing data that can go on a table to new intellectual thought it would be basic and new clinical modalities?
What are the matrix of success?

- The matrix of success is that you have things that are unique, distinctive, and forward thinking that actually make a difference.

- We need things that can be useful to a patient and important to basic science.
What are the global contexts that we should be aware of?

<table>
<thead>
<tr>
<th>Cross-cultural Communication</th>
<th>Structural (Process of care)</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Language</td>
<td>1. Legal/regulatory restrictions</td>
<td>1. Lack of providers</td>
</tr>
<tr>
<td>2. Region (rural, suburban, urban)</td>
<td>- Donor gametes</td>
<td>2. Lack of knowledge among oncologists</td>
</tr>
<tr>
<td>3. Beliefs/customs</td>
<td>- Donor embryos</td>
<td>3. Lack of awareness of oncofertility developments</td>
</tr>
<tr>
<td>4. Ethnicity</td>
<td>- Donor anonymity</td>
<td>4. Lack of time</td>
</tr>
<tr>
<td>5. Religion</td>
<td>- Posthumous</td>
<td>5. Lack of site-specific guidelines</td>
</tr>
<tr>
<td>6. Education of the patients and the clinical staff</td>
<td>2. Lack of insurance cover</td>
<td>6. A hesitance of patients to bring up their desire to preserve their fertility</td>
</tr>
<tr>
<td></td>
<td>- Full / Partial / No</td>
<td>7. Resistance among oncologists to discuss fertility issues (e.g. to child, to poor prognosis)</td>
</tr>
<tr>
<td></td>
<td>3. Access to a psychologist during the fertility preservation</td>
<td>8. The inability to delay treatment of aggressive cancers/delay in diagnosis</td>
</tr>
<tr>
<td></td>
<td>4. Economical background</td>
<td>9. The ways that cancer drugs are changed</td>
</tr>
<tr>
<td></td>
<td>5. Lack of infrastructure</td>
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<td></td>
<td>6. Information dissemination</td>
<td></td>
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<td></td>
<td>7. Age limit (Adult v.s. pediatrics)</td>
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<tr>
<td></td>
<td>8. Variation in drugs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Variation in cancer treatment modality</td>
<td></td>
</tr>
</tbody>
</table>
The definition of cultural competence in global oncofertility

The ability of system to provide rapid care to patients with…….

Diverse models  
Economic options  
Navigation options  
Age appropriate care  
Practical options

Referral pathways  
Access to oncofertility information  
Language translation  
Education

To meet patient’s social, cultural, and linguistic needs for the better QOL
Initial recommendations and thoughts
Tools and techniques that help achieve cultural competence
To overcome cross cultural communication barriers:

• Use English hub
• Prepare educational tools in various regional languages
• Web open source
To overcome Structural barriers:
• Understand the differences between countries, cultures, regions and ethnicity through the table of global contexts and through the people.

To overcome Clinical barriers:
• Educational tools (e.g. textbook, leaflets, videos, websites…) can overcome the discussion barriers such as lack of time and professional hesitancy.

• Guidelines/policies

• Educate physicians, nurses, counselors, Pharmacologists and para-medical staff.

• Use familiar language with the patients and parents while counseling

• Create awareness of oncologists through seminars and symposium
Oncofertility Consortium: A global committee

• Identify what the elements are.

• A global committee of cultural competence to “harmonize” and distribute

This makes oncofertility unique, distinctive, and forward thinking. It is leading science and medicine to a new way of working.
Evaluation of cultural competence

Evaluation surveys from global collaboration members can provide useful feedback to framework cultural competence in global oncofertility.

Thank you for taking the time to participate in this study. This study aims to understand the various barriers which impede in achieving cultural competence in the field of oncofertility and to propose framework to achieve cultural competence in oncofertility. Please answer the following questions.
Steps

1. Assemble the information from this meeting
2. Get IRB approval for the survey
3. Send the survey to global community
4. Finish analysis the data
5. Write the paper with global community
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Thank you
Questions and comments?
The Future of the Global Partners Network

**OPEN** will bridge the gap between domestic and international programs to establish a strong global network where members share resources, methodologies and experiences. It will build upon the strong framework of the NPC and Global Partners and maintain the valuable subcommittees where highly-engaged peers meet (both in person and virtually) to develop new research protocols, identify best practices, and discuss challenges and pathways to success.
OPEN Benefits

- Global Partners access to all NPC subcommittees
- Create new subcommittees based on contemporary needs in global setting
- Nominations for Global Liaison each year
- More networking and more powerful connections!
Opportunities to Participate

• Be a local champion of change!
  – Host a meeting
  – Participate in monthly Virtual Grand Rounds
  – Attend annual Oncofertility Conference
  – Provide updates for quarterly newsletter
  – Join relevant subcommittees
  – Develop survey studies for a deeper understanding of oncofertility in your country
  – Publish papers
  – Translate materials to native language
Oncofertility Resources:

- Oncofertility.northwestern.edu
- savemyfertility.org
- Myoncofertility.org
- Preservefertility.northwestern.edu
- Reprotopia.northwestern.edu
Thank you!