

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

Alexandra S. Rashedi<sup>1</sup>; Saskia F. de Roo<sup>2</sup>; Lauren M. Ataman<sup>1</sup>; Maxwell E. Edmonds<sup>1</sup>; Adelino Amaral Silva<sup>3</sup>; Anibal Scarella<sup>4</sup>; Anna Horbaczewska<sup>5</sup>; Antoinette Anazodo<sup>6</sup>; Ayse Arvas<sup>7</sup>; Bruno Ramalho de Carvalho<sup>8</sup>; Cassio Sartorio<sup>9</sup>; Catharina C.M. Beerendonk<sup>2</sup>; Cesar Diaz-Garcia<sup>10</sup>; Chang Suk Suh<sup>11</sup>; Cláudia Melo<sup>12</sup>; Claus Yding Andersen<sup>13</sup>; Eduardo Motta<sup>14</sup>; Ellen M. Greenblatt<sup>15</sup>; Ellen Van Moer<sup>16</sup>; Elnaz Zand<sup>17</sup>; Fernando M. Reis<sup>18</sup>; Flor Sánchez<sup>19</sup>; Guillermo Terrado<sup>20</sup>; Jhenifer K. Rodrigues<sup>18</sup>; Joao Marcos de Meneses e Silva<sup>21</sup>; Johan Smitz<sup>16</sup>; Jose Medrano<sup>22</sup>; Jung Ryeol Lee<sup>11</sup>; Katharina Winkler-Crepaz<sup>23</sup>; Kristin Smith<sup>1</sup>; Lígia Helena Ferreira Melo e Silva<sup>21</sup>; Ludwig Wildt<sup>23</sup>; Mahmoud Salama<sup>24</sup>; María del Mar Andrés<sup>22</sup>; Maria T. Bourlon<sup>25</sup>; Mario Vega<sup>26</sup>; Maurício Barbour Chehin<sup>27</sup>; Michel De Vos<sup>28</sup>; Mohamed Khrouf<sup>29</sup>; Nao Suzuki<sup>30</sup>; Osama Azmy<sup>24</sup>; Paula Fontoura<sup>31</sup>; Paulo Henrique Almeida Campos-Junior<sup>32</sup>; Peter Mallmann<sup>33</sup>; Ricardo Azambuja<sup>34</sup>; Ricardo M. Marinho<sup>35</sup>; Richard A. Anderson<sup>36</sup>; Robert Jach<sup>5</sup>; Roberto de A. Antunes<sup>37</sup>; Rod Mitchell<sup>36</sup>; Rouhollah Fathi<sup>17</sup>; Satish Kumar Adiga<sup>38</sup>; Seido Takae<sup>30</sup>; Seok Hyun Kim<sup>39</sup>; Sergio Romero<sup>19</sup>; Silvana Chedid Grieco<sup>40</sup>; Talya Shaulov<sup>41</sup>; Tatsuro Furui<sup>42</sup>; Teresa Almeida-Santos<sup>43</sup>; Willianne Nelen<sup>2</sup>; Yasmin Jayasinghe<sup>44</sup>; Yodo Sugishita<sup>30</sup>; and Teresa K. Woodruff<sup>1</sup>

**PURPOSE** In the accompanying article, “Survey of Fertility Preservation Options Available to Patients With Cancer Around the Globe,” we showed that specific fertility preservation services may not be offered at various sites around the world because of cultural and legal barriers. We assessed global and regional experiences as well as the legal status of third-party reproduction and adoption to serve as a comprehensive international data set and resource for groups that wish to begin oncofertility interventions.

**METHODS** We provide data on the legalities of third-party assisted reproductive technologies and other family-building options in the 28 oncofertility-practicing countries surveyed.

**RESULTS** We found regional and country differences that will be important in the development of tailored resources for physicians and for patient brochures that are sensitive to these local restrictions and cultural norms.

**CONCLUSION** Because many patients first consult Web-based materials, the formal assessment of the availability of these options provides members of the global oncofertility community with data to which they might otherwise not have ready access to better serve their patients.

JCO Global Oncol 6:345-349. © 2017 by American Society of Clinical Oncology

Creative Commons Attribution Non-Commercial No Derivatives 4.0 License 

## INTRODUCTION

Fertility management in the cancer setting (ie, oncofertility) is challenging for a variety of technical reasons that are associated with timing of cancer treatment, the invasive nature of some options, and the required links between cancer and fertility care.<sup>1</sup> In addition to these practice management and biologic hurdles, we identified the legal status of adoption and third-party reproduction as a barrier. We then assessed the specific roadblocks that exist in surveyed countries. The goal of this analysis is to deliver authoritative information to emerging practices that may receive information about the field from a variety of Web resources and that may be unaware of local barriers to the spectrum of options.

## METHODS

The survey design, data collection, and analysis are described in the accompanying article.<sup>1</sup> Survey

respondents were asked about barriers to counseling patients on and providing them with all existing parenting options in the face of a cancer diagnosis, gonadotoxic treatment, and possible consequent infertility. Answers provided specifics on challenges faced at their center and/or within their country, which motivated us to conduct additional research and present detailed data about the legality of surrogacy; adoption; and egg, sperm, and embryo donation. We listed the information in tables and conducted a literature search to fill in the gaps in the original data and to validate the information provided. All authors approved the information presented in the Data Supplement.

## RESULTS

A significant barrier to oncofertility care noted in the survey responses<sup>1</sup> was the presence of legal, cultural, and regulatory restrictions. Adoption and third-party

### ASSOCIATED CONTENT

#### Data Supplement

Author affiliations and support information (if applicable) appear at the end of this article.

Accepted on May 9, 2017 and published at [ascopubs.org/journal/go](https://ascopubs.org/journal/go) on June 30, 2017; DOI <https://doi.org/10.1200/JGO.2017.009944>

assisted reproductive technology (ART), including surrogacy and egg, sperm, and embryo donation, were consistently identified as associated with these restrictions. We assessed the prevailing laws in each country with regard to surrogacy; adoption; and egg, sperm, and embryo donation (Data Supplement).

### Surrogacy (Gestational)

Of the 28 countries surveyed, altruistic surrogacy is explicitly legal in 12, whereas nine outlaw it. Specific restrictions apply to whom may access surrogacy in six countries, whereas in six other countries, all people may access it no matter their sexual orientation or marital status. Surrogacy is unregulated by law in 19 countries (Data Supplement), and altruistic surrogacy arrangements occur in nine of these countries without regulation. Commercial surrogacy is explicitly prohibited in 11 countries. In Iran, for example, both altruistic and commercial surrogacy are practiced, but no regulation of these arrangements exists. In the United Kingdom and Australia, advertisement for surrogacy is illegal, which is also true in Canada where brokers and advertisement are illegal. In four countries, surrogacy is accessible to both citizens and foreigners (Iran, Belgium, Russia, and Canada). The laws that govern the practice of surrogacy greatly differ among states in Mexico, the United States, and Australia.

### Adoption

In almost all countries surveyed, adoption is explicitly legal, except in Egypt, where it is prohibited (Data Supplement). In six of these countries, legislation allows homosexual married couples to adopt. In other countries, such as Chile, adoption for homosexual couples is illegal; however, because single persons may adopt, homosexual couples may apply, but only one person is recognized as the legal parent. In India, Iran, Turkey, Denmark, Portugal, the Netherlands, and Argentina, couples (either heterosexual or homosexual) must have lived together for a certain number of years at the time of adoption. In four countries, adoption is only available to heterosexual married couples. In some countries, adoption is highly restricted; in Iran, for example, neither person in a couple who seeks to adopt can have a chronic, contagious, or terminal disease.

### Egg, Sperm, and Embryo Donation

Egg donation is legal in 19 of the 28 countries surveyed (Data Supplement). In four countries, egg donation is illegal, and in five countries, it is unregulated. In a majority of countries ( $n = 22$ ), egg donation is accessible to heterosexual married couples. In 12 countries, it is also accessible to homosexual married couples, and in 17 countries, it is accessible to unmarried persons.

Similar results are reported for sperm donation, which is legal in 20 of the countries surveyed, illegal in three, and unregulated in five. Sperm donation is accessible to heterosexual married couples in 23 countries, to homosexual

married couples in 12, and to unmarried couples in 18. In some countries, such as Iran, sperm donation is only available when medically necessary (in cases of infertility).

Embryo donation is explicitly legal in 13 countries surveyed but is illegal in nine and unregulated in six. Embryo donation is accessible to heterosexual couples in 17 countries, to homosexual married couples in seven, and to unmarried couples in 12. In 10 countries, anonymous gamete or embryo donation is permitted. In South Korea, embryo donation is only permitted for research purposes, and such research studies must be approved by the institutional review board and related to certain disease categories, such as infertility, contraception, and certain rare or incurable diseases. In Belgium and Denmark, both anonymous and nonanonymous donations of gametes and embryos are legal, but nonanonymous embryo donation is illegal in Belgium.

## DISCUSSION

The survey responses indicated various legal challenges about specific procedures. One notable cultural and legal barrier to oncofertility care was related to the use of surrogacy. The survey findings agree with those reported in a study by Wennberg et al<sup>2</sup> in Sweden in which women's attitudes toward ARTs were neutral or favorable, except for surrogacy. In addition, we found significant hurdles to third-party procedures, such as age restrictions and requirements of medical indications to allow treatment, which also proves consistent with previous studies.<sup>3</sup> These data highlight the importance of more-explicit investigations into these questions, particularly their sociologic etiologies, legal implications, and variations among world countries and regions.

During the development of the survey questions, we believed it crucial to ask about third-party ARTs, namely surrogacy and adoption, along with egg, sperm, and embryo donation.<sup>4,5</sup> The rationale for including surrogacy early in the initial fertility consultation is that women who are sterile as a result of cancer may also have uterine dysfunction and a higher risk of recurrent miscarriage.<sup>4,7</sup> Thus, providers should consider a conversation with patients about their ability to carry offspring after cancer treatment, including the possibility that third-party alternatives might be necessary in the setting of uterine dysfunction.<sup>4,7</sup> The mention of surrogacy and adoption options provides patients with full knowledge of all possibilities that they may pursue after treatment, regardless of their remaining fertility function.<sup>6</sup> For patients who did not preserve fertility before treatment, adoption is another option for family building.

India is a prime example of the potential negative impact of regional differences in laws and social restrictions with regard to surrogacy, particularly with surrogacy tourism. Before commercial surrogacy was banned countrywide for foreigners in 2016,<sup>8</sup> profits often were collected by middle men and agencies rather than by the women who worked

as surrogates,<sup>9</sup> which supports the argument for a standard set of policies to favor altruistic surrogacy and adoption and to prevent exploitation of surrogates. Such a policy might be recommended by global health organizations, such as the WHO. In addition, surrogacy customs and laws should be made comprehensive, easily interpretable, and translational to avoid exploitive surrogacy tourism in poorer communities where women may be willing to compromise their beliefs and health for monetary gain or are pressured to do so by others.<sup>9,10</sup>

Adoption is another service the survey identified to be associated with cultural and legal barriers. At first glance, adoption is legal in most countries, but couples do not often pursue it, as indicated in the open-ended survey responses. The Hague Adoption Convention, an international agreement that established the ethics and proper practices for intercountry adoption, has been upheld by 98 countries since its founding in 1993.<sup>11</sup> This agreement provides the legal precedent for providers to begin the conversation with young patients or families. A similar convention was recently convened by the Hague Conference on Private International Law on the private international legal issues that surround the status of children, including issues that arise from international surrogacy arrangements. This meeting established that contemporary global standards should be developed to avoid the exploitation of vulnerable populations and will reconvene to discuss the development of these standards.<sup>12,13</sup>

Individuals who survive cancer are not specifically legally prohibited from adoption; however, patients with cancer have documented difficulty in adopting.<sup>14</sup> When evaluating this issue formally, we found that adoption services were not up to date on the latest survivorship data. Thus, perception rather than legal issues may remain the greatest barrier to adoption for this cohort.

Although fertility preservation procedures were not as commonly identified as being associated with cultural barriers over third-party assisted reproduction options, we identified unique regional instances. Specifically, the Banco de Sêmen do Rio de Janeiro stated that the lack of compensation for sperm donors is a huge barrier to providing this service to patients. Cultural customs play a significant role in the regulation of third-party ARTs, which are explicitly observed in two of the surveyed countries, Egypt and Tunisia. Both countries completely outlaw egg, sperm, and embryo donation. In addition, Tunisian representatives from the ART center at the Aziza Othmana Hospital of Tunis cited the perceived loss of virginity as a great factor in female patients' hesitance to undergo transvaginal procedures, such as oocyte retrieval, a procedure required for oocyte cryopreservation. Such cultural barriers likely will be more challenging to surmount because of the ingrained quality of these conventions. Fortunately, the repurposing of a technique abandoned in the 1980s for this new indication, the perurethral transvesical route where oocytes are retrieved through the bladder,<sup>15</sup> allows oncofertility to advance as a field and improves access for patients in a world where these barriers are the current reality and may take decades to overcome.

In conclusion, tremendous differences in cultural norms; legislation; and accessibility of surrogacy, adoption, and ART options exist around the world. Even between neighboring countries, differences are apparent. These variations point to the need for consolidating this information; clarification of the governing laws and attitudes in oncofertility-practicing countries thereby will help both providers and patients to provide global understanding about third-party parenting options for patients who have undergone gonadotoxic cancer treatment and have compromised fertility as a result.

## AFFILIATIONS

<sup>1</sup>Northwestern University, Chicago, IL

<sup>2</sup>Radboud University Medical Center, Nijmegen, the Netherlands

<sup>3</sup>GENESIS—Center for Assistance in Human Reproduction, Rio de Janeiro, Brazil

<sup>4</sup>Universidad de Valparaíso, Valparaíso, Chile

<sup>5</sup>Jagiellonian University Medical College, Kraków, Poland

<sup>6</sup>University of New South Wales, Sydney, New South Wales

<sup>7</sup>Onkofertilite Turkiye, Istanbul, Turkey

<sup>8</sup>BONVENA—Reproductive Medicine, Brasília, Rio de Janeiro, Brazil

<sup>9</sup>Vida Centro de Fertilidade, Rio de Janeiro, Brazil

<sup>10</sup>University of Valencia, Valencia, Spain

<sup>11</sup>Seoul National University College of Medicine, Seoul, South Korea

<sup>12</sup>University of Coimbra, Coimbra, Portugal

<sup>13</sup>University of Copenhagen, Copenhagen, Denmark

<sup>14</sup>Federal University of São Paulo, São Paulo, Brazil

<sup>15</sup>University of Toronto, Toronto, Ontario, Canada

<sup>16</sup>Universitair Ziekenhuis Brussel, Jette, Belgium

<sup>17</sup>Royan Institute for Reproductive Biomedicine, Tehran, Iran

<sup>18</sup>Universidade Federal de Minas Gerais, Brazil

<sup>19</sup>Centro de Estudios e Investigaciones en Biología y Medicina Reproductiva, Lima, Peru

<sup>20</sup>Pregna Medicina Reproductiva, Buenos Aires, Argentina

<sup>21</sup>Hemorrede do Ceará, Fortaleza, São João del-Rei, Brazil

<sup>22</sup>Instituto de Investigación Sanitaria La Fe, Valencia, Spain

<sup>23</sup>Medical University of Innsbruck, Innsbruck, Austria

<sup>24</sup>National Research Center, Cairo, Egypt

<sup>25</sup>Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Mexico

<sup>26</sup>IVF Centro de Reproducción, Panama City, Panama

<sup>27</sup>University of Santo Amaro, São Paulo, Brazil

<sup>28</sup>Vrije Universiteit Brussel, Brussels, Belgium

<sup>29</sup>Université de Tunis El Manar, Tunis, Tunisia

<sup>30</sup>St Marianna University School of Medicine, Kawasaki, Japan

<sup>31</sup>Banco de Sêmen do Rio de Janeiro, Rio de Janeiro, Brazil

<sup>32</sup>Federal University of São João del-Rei, São João del-Rei, Brazil

<sup>33</sup>University of Cologne, Cologne, Germany

<sup>34</sup>Fertilitat Centro de Medicina Reprodutiva, Porto Alegre, Brazil

<sup>35</sup>Pró-Criar Medicina Reprodutiva, Minas Gerais, Brazil

<sup>36</sup>University of Edinburgh, Edinburgh, United Kingdom

<sup>37</sup>Fertipraxis—Centro de Reprodução Humana, Rio de Janeiro, Brazil

<sup>38</sup>Manipal University, Manipal, India

<sup>39</sup>Seoul National University Hospital, Seoul, South Korea

<sup>40</sup>VI São Paulo–Chedid Grieco, São Paulo, Brazil

<sup>41</sup>University of Montreal Hospital Centre, Montreal, Quebec, Canada

<sup>42</sup>Gifu University School of Medicine, Gifu, Japan

<sup>43</sup>Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal

<sup>44</sup>Royal Women's Hospital, Melbourne, Victoria, Australia

## CORRESPONDING AUTHOR

Teresa K. Woodruff, PhD, Department of Obstetrics and Gynecology, Northwestern University, 303 E Superior St, Lurie 10-119, Chicago, IL 60611; Twitter: @teresakwoodruff; e-mail: tkw@northwestern.edu.

## SUPPORT

Supported by the Center for Reproductive Health After Disease (P50HD076188) from the National Center for Translational Research in Reproduction and Infertility.

## AUTHOR CONTRIBUTIONS

**Conception and design:** Alexandra S. Rashedi, Saskia F. de Roo, Lauren M. Ataman, Adelino Amaral Silva, Anibal Scarella, Antoinette Anazodo, Ayse Arvas, Cassio Sartorio, Catharina C.M. Beerendonk, Cesar Diaz-Garcia, Chang Suk Suh, Claus Yding Andersen, Eduardo Motta, Ellen M. Greenblatt, Ellen Van Moer, Elnaz Zand, Jhenifer K. Rodrigues, Joao Marcos de Meneses e Silva, Johan Smitz, Jung Ryeol Lee, Kristin Smith, Lígia Helena Ferreira Melo e Silva, Ludwig Wildt, Mahmoud Salama, María del Mar Andrés, Maria T. Bourlon, Mauricio Barbour Chehin, Michel De Vos, Mohamed Khrouf, Nao Suzuki, Osama Azmy, Paulo Henrique Almeida Campos-Junior, Peter Mallmann, Ricardo Azambuja, Ricardo M. Marinho, Richard A. Anderson, Robert Jach, Roberto de A. Antunes, Satish Kumar Adiga, Seido Takae, Seok Hyun Kim, Silvana Chedid Grieco, Tatsuro Furui, Teresa Almeida-Santos, Willianne Nelen, Yasmin Jayasinghe, Yodo Sugishita, Teresa K. Woodruff

**Provision of study materials or patients:** Cassio Sartorio

**Administrative support:** Alexandra S. Rashedi, Lauren M. Ataman

**Collection and assembly of data:** Alexandra S. Rashedi, Saskia F. de Roo, Lauren M. Ataman, Adelino Amaral Silva, Anibal Scarella, Anna Horbaczewska, Antoinette Anazodo, Ayse Arvas, Bruno Ramalho de Carvalho, Cassio Sartorio, Catharina C.M. Beerendonk, Cesar Diaz-Garcia, Chang Suk Suh, Cláudia Melo, Claus Yding Andersen, Eduardo Motta, Ellen M. Greenblatt, Ellen Van Moer, Elnaz Zand, Fernando M. Reis, Flor Sánchez, Guillermo Terrado, Jhenifer K. Rodrigues, Joao Marcos de Meneses e Silva, Johan Smitz, Jung Ryeol Lee, Katharina Winkler-Crepaz, Kristin Smith, Lígia Helena Ferreira Melo e Silva, Ludwig Wildt, Mahmoud Salama, María del Mar Andrés, Maria T. Bourlon, Mario Vega, Mauricio Barbour Chehin, Michel De Vos, Mohamed Khrouf, Nao Suzuki, Osama Azmy, Paula Fontoura, Paulo Henrique Almeida Campos-Junior, Peter Mallmann, Ricardo Azambuja, Ricardo M. Marinho, Richard A. Anderson, Robert Jach, Roberto de A. Antunes, Rod Mitchell, Rouhollah Fathi, Satish Kumar Adiga, Seido Takae, Seok Hyun Kim, Sergio Romero, Silvana Chedid Grieco, Tatsuro Furui, Teresa Almeida-Santos, Willianne Nelen, Yasmin Jayasinghe, Yodo Sugishita, Teresa K. Woodruff

**Data analysis and interpretation:** Alexandra S. Rashedi, Saskia F. de Roo, Lauren M. Ataman, Maxwell E. Edmonds, Adelino Amaral Silva, Anibal Scarella, Antoinette Anazodo, Ayse Arvas, Bruno Ramalho de Carvalho, Cassio Sartorio, Catharina C.M. Beerendonk, Cesar Diaz-Garcia, Chang Suk Suh, Claus Yding Andersen, Eduardo Motta, Ellen M. Greenblatt, Ellen Van Moer, Elnaz Zand, Flor Sánchez, Guillermo Terrado, Jhenifer K. Rodrigues, Joao Marcos de Meneses e Silva, Johan Smitz, Jose Medrano, Jung Ryeol Lee, Kristin Smith, Lígia Helena Ferreira Melo e Silva, Ludwig Wildt, Mahmoud Salama, María del Mar Andrés, Maria T. Bourlon, Mauricio Barbour Chehin, Michel De Vos, Mohamed Khrouf, Nao Suzuki, Osama Azmy, Paula Fontoura, Paulo Henrique Almeida Campos-Junior, Peter Mallmann, Ricardo Azambuja, Ricardo M. Marinho, Richard A. Anderson, Robert Jach, Roberto de A. Antunes, Rod Mitchell, Rouhollah

Fathi, Satish Kumar Adiga, Seido Takae, Seok Hyun Kim, Sergio Romero, Silvana Chedid Grieco, Talya Shaulov, Tatsuro Furui, Teresa Almeida-Santos, Willianne Nelen, Yasmin Jayasinghe, Yodo Sugishita, Teresa K. Woodruff

**Manuscript writing:** All authors

**Final approval of manuscript:** All authors

**Accountable for all aspects of the work:** All authors

## AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

The following represents disclosure information provided by authors of this manuscript. All relationships are considered compensated. Relationships are self-held unless noted. I = Immediate Family Member, Inst = My Institution. Relationships may not relate to the subject matter of this manuscript. For more information about ASCO's conflict of interest policy, please refer to [www.asco.org/rwc](http://www.asco.org/rwc) or [jco.ascopubs.org/site/ifc](http://jco.ascopubs.org/site/ifc).

**Alexandra S. Rashedi**

**Employment:** Cigna (I)

**Stock or Other Ownership:** Cigna (I)

**Antoinette Anazodo**

**Research Funding:** Merck Serono

**Cassio Sartorio**

**Employment:** Vida Centro de Fertilidade

**Leadership:** Vida Centro de Fertilidade

**Stock or Other Ownership:** Vida Centro de Fertilidade

**Catharina C.M. Beerendonk**

**Travel, Accommodations, Expenses:** Goodlife

**Ellen M. Greenblatt**

**Consulting or Advisory Role:** Ferring Pharmaceuticals, EMD Serono

**Travel, Accommodations, Expenses:** EMD Serono

**Fernando M. Reis**

**Honoraria:** Politec Saúde (I)

**Consulting or Advisory Role:** Politec Saúde (I)

**Speakers' Bureau:** UCB (I)

**Travel, Accommodations, Expenses:** Abbott Laboratories (I)

**Flor Sánchez**

**Patents, Royalties, Other Intellectual Property:** patent pending

**Johan Smitz**

**Speakers' Bureau:** Ferring Pharmaceuticals

**Travel, Accommodations, Expenses:** Ferring Pharmaceuticals

**Maria T. Bourlon**

**Leadership:** Medivation, Astellas Pharma

**Honoraria:** Medivation, Astellas Pharma

**Richard A. Anderson**

**Consulting or Advisory Role:** Roche, HRA Pharma, NeRe Pharmaceuticals

**Speakers' Bureau:** Roche, Beckman Coulter, IBSA Institut Biochimique

**Research Funding:** Ferring Pharmaceuticals

**Travel, Accommodations, Expenses:** IBSA Institut Biochimique

**Roberto de A. Antunes**

**Consulting or Advisory Role:** Merck Serono

**Travel, Accommodations, Expenses:** Merck Serono, MSD

**Sergio Romero**

**Patents, Royalties, Other Intellectual Property:** patent pending

**Teresa Almeida-Santos**

**Consulting or Advisory Role:** Merck, MSD

**Research Funding:** Merck Serono

**Teresa K. Woodruff**

**Research Funding:** Ferring Pharmaceuticals (Inst)

No other potential conflicts of interest were reported.

## ACKNOWLEDGMENT

We thank Louise Johnson, the chief executive officer of the Victorian Assisted Reproductive Treatment Authority, for information about assisted reproductive technology laws in Australia.

## REFERENCES

1. Rashedi AS, de Roo SF, Ataman LM, et al: Survey of Fertility Preservation Options Available to Patients With Cancer Around the Globe. *J Glob Oncol* 10.1200/JGO.2016.008144
2. Wennberg AL, Rodriguez-Wallberg KA, Milsom I, et al: Attitudes towards new assisted reproductive technologies in Sweden: A survey in women 30-39 years of age. *Acta Obstet Gynecol Scand* 95:38-44, 2016
3. Berg Brigham K, Cadier B, Chevreur K: The diversity of regulation and public financing of IVF in Europe and its impact on utilization. *Hum Reprod* 28:666-675, 2013
4. Loren AW, Mangu PB, Beck LN, et al: Fertility preservation for patients with cancer: American Society of Clinical Oncology clinical practice guideline update. *J Clin Oncol* 31:2500-2510, 2013
5. Lawson AK, Klock SC, Pavone ME, et al: Psychological counseling of female fertility preservation patients. *J Psychosoc Oncol* 33:333-353, 2015
6. Green DM, Sklar CA, Boice JD Jr, et al: Ovarian failure and reproductive outcomes after childhood cancer treatment: Results from the Childhood Cancer Survivor Study. *J Clin Oncol* 27:2374-2381, 2009
7. Signorello LB, Mulvihill JJ, Green DM, et al: Stillbirth and neonatal death in relation to radiation exposure before conception: A retrospective cohort study. *Lancet* 376:624-630, 2010
8. US Embassy & Consulates in India: Surrogacy, ART, and IVF. <http://newdelhi.usembassy.gov/service/reporting-births-and-citizenship-questions/surrogacy-a.r.t.-and-dna-testing>
9. Saxena P, Mishra A, Malik S: Surrogacy: Ethical and legal issues. *Indian J Community Med* 37:211-213, 2012
10. Pardes A: How commercial surrogacy became a massive international business, 2016. <https://www.vice.com/read/how-commercial-surrogacy-became-a-massive-international-business>
11. Hague Conference on Private International Law: Convention of 29 May 1993 on Protection of Children and Co-operation in Respect of Intercountry Adoption. <https://www.hcch.net/en/instruments/conventions/status-table/?cid=69>
12. Hutchinson A-M: The Hague Convention on Surrogacy: Should We Agree to Disagree? ABA Section of Family Law 2012 Fall CLE Conference, Philadelphia, PA, October 2012
13. Hague Conference on Private International Law: Report of the February 2016 Meeting of the Experts' Group on Parentage/Surrogacy. Budapest, Hungary, Center for Ethics and Law in Biomedicine, 2016
14. Gardino SL, Russell AE, Woodruff TK: Adoption after cancer: Adoption agency attitudes and perspectives on the potential to parent post-cancer. *Cancer Treat Res* 156:153-170, 2010
15. Khrouf M, Bouyahia M, Berjeb K, et al: Perurethral transvesical route for oocyte retrieval: An old technique for a new indication. *Fertil Steril* 106:e129, 2016 (suppl 3)

