# Contents

**Foreword** ................................................................. v
*Teresa K. Woodruff and Karrie Ann Snyder*

**Foreword** ................................................................. vii
*Lindsay Beck and Joyce Reinecke*

**Contributors** .......................................................... xvii

## Part I Introduction

1. **The Emergence of a New Interdiscipline: Oncofertility** ........ 3
   *Teresa K. Woodruff*
   - Oncofertility: The New Offensive in the War on Cancer .......... 3
   - Secondary Effects of Treatment on the Health and Quality of Life of Young Survivors of Cancer ......................... 4
   - Fertility Threats Due to Cancer Treatment .......................... 5
   - An Emerging Urgent Unmet Need for Young Cancer Patients: Balancing Life-Preserving but Fertility-Threatening Cancer Treatments ............................................................ 6
     *Information GAP* .......................................................... 9
     *Data GAP* ................................................................. 10
     *Option GAP* .............................................................. 10
     Conclusion .................................................................. 11

## Part II Fertility Risk and Treatment Options

2. **Fertility Management for Women With Cancer** ............... 15
   *Sanjay K. Agarwal and R. Jeffrey Chang*
   - Ovarian Physiology ...................................................... 15
   - Impact of Cancer Therapies on Ovarian Function .................. 18
   - Current Techniques of Fertility Preservation ....................... 20
     *Embryo Freezing* .......................................................... 20
     *Ovarian Tissue Freezing* ................................................ 22
8. **Ovarian Tissue Cryopreservation and Transplantation: Banking Reproductive Potential for the Future**
   
   *David Lee*

   - Indications for Ovarian Tissue Banking ........................................... 110
   - *Scope of the Clinical Problem and Incidence of Ovarian Failure* ........... 110
   - *Gonadotoxicity of Chemotherapy* .................................................. 111
   - *Gonadotoxicity of Radiation Therapy* ............................................. 112
   - Limitations of Fertility: Preserving Techniques .................................. 113
   - The Promise of Ovarian Tissue Banking .......................................... 115
   - *Cryopreservation of Ovarian Tissue has been Successful* .................... 116
   - *Autotransplantation of Ovarian Tissue has been Successful* ................. 117
   - *Problems with Ovarian Transplantation: Re-Introduction of Cancer* ......... 123
   - Xenografting as a Potential Solution ............................................. 124
   - Conclusion ................................................................................. 126

9. **Progress, History and Promise of Ovarian Cryopreservation and Transplantation for Pediatric Cancer Patients**

   *Yasmin Gosiengfiao*

   References .................................................................................. 132

**Part IV Health Care Decision-Making**

10. **Oncofertility and the Social Sciences** ........................................ 137

    *Karrie Ann Snyder*

    - Studying Cancer Within the Social Sciences ...................................... 138
    - Gender and Oncofertility ................................................................. 139
    - *Gender and Patient-Physician Interactions* .................................... 140
    - *Gender and the Experience of Infertility* ....................................... 141
    - Race/Ethnicity and Oncofertility ..................................................... 142
    - *Race/Ethnicity and Patient–Physician Interactions* ......................... 143
    - *Race/Ethnicity and Family and Community Involvement* ................. 144
    - *The Digital Divide and Race/Ethnicity* ........................................ 145
    - Conclusion ................................................................................. 146
    - References ................................................................................. 147

11. **Shared Decision Making: Fertility and Pediatric Cancers** ............... 149

    *Marla L. Clayman, Kathleen M. Galvin, and Paul Arntson*

    - The Current State of Pediatric Oncofertility ................................... 150
    - Family Communication in Context .................................................. 151
    - Shared Decision Making in Theory and in Practice ............................. 152
15. Fertility Preservation and Adolescent Cancer Patients: Lessons from Adult Survivors of Childhood Cancer and Their Parents 201

Methods 203
Study Design and Sample Recruitment 203
Data Collection and Analysis 203
Results 204
Sample Characteristics 204
Content Analysis 204
Discussion 211
Conclusion 215
References 216

Part VI Training in a New Medical Discipline and Medical Guidelines

16. Oncofertility: A New Medical Discipline and the Emerging Scholar 221
   Laxmi A. Kondapalli

Infertility: An Unmet Clinical Need for Young Cancer Patients 222
Oncofertility and the Oncofertility Scholar 226
Reproductive Endocrinology and Infertility as the Springboard to a New Oncofertility Scholar 226
Research Directions 229
Future Directions 230
Conclusion 231
References 233

17. Oncofertility Consortium Consensus Statement: Guidelines for Ovarian Tissue Cryopreservation 235
   Leilah E. Backhus, Laxmi A. Kondapalli, R. Jeffrey Chang, Christos Coutifaris, Ralph Kazer, and Teresa K. Woodruff

References 239

Part VII Patient Stories and Oncofertility

18. Personal Accounts of Cancer and Infertility 243
   Provided by Fertile Hope

A New Generation of Hope: Antoinette’s Story 243
Starting a Family One Day: Adriane’s Story 244
Oncofertility
Fertility Preservation for Cancer Survivors
Woodruff, T.; Snyder, K.A. (Eds.)
2007, XVIII, 263 p., Hardcover
ISBN: 978-0-387-72292-4