

Contents

List of contributors vii

Section 1 – Anatomy and physiology

- 1 **Functional anatomy of the hypothalamic–pituitary–gonadal axis and the male reproductive tract** 1
Nelson E. Bennett Jr.
- 2 **Spermatogenesis** 11
Kathleen Hwang, Alex Ridgeway, and Dolores J. Lamb
- 3 **The semen analysis** 23
Mary K. Samplaski and Edmund S. Sabanegh Jr.
- 4 **Physiology of ejaculation** 35
John P. Mulhall

Section 2 – Disorders of male fertility

- 5 **History and physical examination** 39
Ndidiamaka Onwubalili and Hossein Sadeghi-Nejad
- 6 **Abnormalities of semen parameters** 51
Daniel H. Williams IV and Jay I. Sandlow
- 7 **Azoospermia** 58
Cara B. Cimmino and Robert D. Oates
- 8 **Varicocele** 64
Peter J. Stahl and Marc Goldstein
- 9 **Disorders of ejaculation** 71
Doron S. Stember and John P. Mulhall
- 10 **Androgen deficiency in the male** 80
Gregory C. Mitchell and Wayne J. G. Hellstrom
- 11 **Infertility and male sexual dysfunction** 94
Raanan Tal

Section 3 – Impact of cancers and treatment on male fertility

- 12 **Radiation effects on spermatogenesis** 104
Fabio Firmbach Pasqualatto and Ashok Agarwal
- 13 **Chemotherapy effects on spermatogenesis** 110
Akanksha Mehta and Mark Sigman
- 14 **Effects of therapy for solid tumors** 119
Gretchen A. Gignac and Leonard H. Wexler
- 15 **Lymphoma and leukemia** 129
Eytan Stein and Ariella Noy
- 16 **Stem cell transplantation** 133
Ann A. Jakubowski
- 17 **Fertility preservation in men with germ cell tumors** 140
Matthew T. Roberts and Keith Jarvi
- 18 **Effects of therapy for brain cancer** 150
Elena Pentsova and Andrew B. Lassman
- 19 **Male infertility following childhood cancer: special considerations for fertility preservation in children** 161
Mark F. H. Brougham and W. Hamish B. Wallace

Section 4 – Preservation strategies

- 20 **Facilitating discussion about fertility preservation** 172
Gwendolyn P. Quinn and Susan T. Vadaparampil
- 21 **Development of a program to address fertility preservation and parenthood after cancer treatment** 178
Joanne Frankel Kelvin

Contents

- | | |
|--|--|
| <p>22 Psychological consultation and assessment 186
Linda D. Applegarth</p> <p>23 Nutraceuticals in fertility preservation 195
Mark A. Moyad</p> <p>24 Application of spermatogenesis suppression therapies for fertility preservation 203
Rian J. Dickstein, Gunapala Shetty, and Marvin L. Meistrich</p> <p>25 Semen cryobiology and sperm banking 213
Helen R. Levey and Bruce R. Gilbert</p> <p>26 Ethical and legal considerations of sperm and tissue cryopreservation 231
Melissa B. Brisman with assistance from Lauren Murray</p> <p>27 The use of ejaculation induction procedures in cancer patients 243
Dana A. Ohl, Mikkel Fode, Nancy L. Brackett, Charles M. Lynne, Susanne A. Quallich, and Jens Sønksen</p> <p>28 Sperm extraction in the pre-therapy patient 249
Wayland Hsiao and Peter N. Schlegel</p> <p>29 Fertility preservation in the pediatric population: germ cell culture and transplantation 255
Kate H. Kraft and Thomas F. Kolon</p> <p>30 Exogenous androgens: effect on spermatogenesis 265
Mohit Khera</p> | <p>31 Fertility preservation in the female with cancer 273
Kenny A. Rodriguez-Wallberg and Kutluk Oktay</p> <p>Section 5 – Post-therapy considerations</p> <p>32 Psychosocial issues surrounding the use of sperm donation 282
Allison B. Rosen and Lisa Rosenzweig</p> <p>33 Medical therapy for male infertility 292
Loren Jones and Craig Niederberger</p> <p>34 Management of the varicocele in the treated patient 303
Michael L. Eisenberg and Larry I. Lipshultz</p> <p>35 Sperm extraction in the treated patient 314
Wayland Hsiao and Peter N. Schlegel</p> <p>36 Postmortem sperm extraction 322
Andrew C. Kramer and Ellen R. Goldmark</p> <p>37 Fertility following antineoplastic therapy in the male: intrauterine insemination and the assisted reproductive technologies 329
Hey-Joo Kang, Jack Huang, and Owen K. Davis</p> <hr/> <p><i>Index</i> 344</p> <p><i>Color figures are to be found between pp. 230 and 231.</i></p> |
|--|--|