Contents

Contributors xiii

1. Physiology of erythropoiesis 1
   U. Testa

2. Biology of EPO and EPO-receptor 67
   C. Lacombe and P. Mayeux

3. The role of erythropoietin receptor expression on tumor cells 81
   J. Fandrey

4. Problems associated with erythropoietin receptor determination on tumor cells 103
   A. Österborg

5. Definition, classification and characterization of anemia in cancer 117
   M. R. Nowrousian

6. Pathophysiology of anemia in cancer 149
   M. R. Nowrousian

7. Prevalence and incidence of anemia and risk factors for anemia in patients with cancer 189
   H. Ludwig

8. Significance of anemia in cancer chemotherapy 207
   M. R. Nowrousian

9. Incidence and impact of anemia in radiation oncology 249
   J. Dunst and M. Molls

10. Relationship between hemoglobin levels and tumor oxygenation 265
    P. Vaupel, A. Mayer and M. Höckel
11. Tumor hypoxia and therapeutic resistance
   \textit{P. Vaupel and M. Höckel}
   \hfill 283

12. Symptoms of anemia
   \textit{R. Pirker}
   \hfill 307

13. Impact of anemia and red blood cell transfusion on
genorgan function
   \textit{M. R. Nowrousian}
   \hfill 317

14. Relationship of hemoglobin, fatigue, and quality of life in
anemic cancer patients
   \textit{Z. Butt and D. Cella}
   \hfill 369

15. When to use red blood cell transfusions in cancer patients
   with solid tumours?
   \textit{J. K. Jacob and P. J. Barrett-Lee}
   \hfill 393

16. Pharmacology, pharmacokinetics and safety of recombinant
human erythropoietin preparations
   \textit{W. Jelkmann}
   \hfill 407

17. Epoetin treatment of anemia associated with multiple myeloma
   and non-Hodgkin’s lymphoma
   \textit{A. Österborg}
   \hfill 433

18. rhEPO in anemic patients with solid tumors and
chemotherapy – efficacy and safety
   \textit{M. R. Nowrousian}
   \hfill 449

19. Early intervention with recombinant human erythropoietin
for chemotherapy-induced anemia
   \textit{G. H. Lyman and J. Glaspy}
   \hfill 509

20. Recombinant human erythropoietin (rhEPO) therapy
in myelodysplasia
   \textit{E. Hellström-Lindberg}
   \hfill 531

21. Prediction of response to rhEPO in the anemia of cancer
   \textit{Y. Beguin and G. Van Straelen}
   \hfill 541

22. rhEPO in hematopoietic stem cell transplantation
   \textit{G. Van Straelen and Y. Beguin}
   \hfill 583
Contents

23. Treatment of anemia with rhEPO in radiation oncology
   J. Dunst
   615

24. Recombinant human erythropoietin in pediatric oncology
   C. Hastings and J. Feusner
   635

25. rhEPO in surgical oncology
   M. J. Fontaine and L. T. Goodnough
   663

26. Erythropoiesis, iron metabolism and iron supplementation
during erythropoietin therapy
   L. T. Goodnough
   679

27. Are there risks for use of iron in cancer patients?
   P. Gascón
   703

28. Metabolic and physiologic effects of rhEPO in anemic
cancer patients
   K. Lundholm and P. Daneryd
   713

29. Effects of rhEPO on quality of life in anemic cancer patients
   S. Chowdhury, J. F. Spicer, and P. G. Harper
   729

30. Thrombosis during therapy with erythropoiesis stimulating
agents in cancer
   J. Glaspy
   745

31. The effect of rhEPO on survival in anemic cancer patients
   T. J. Littlewood
   759

32. From bench to bedside: Neuroprotective effects of
erythropoietin
   H. Ehrenreich and C. Bartels
   771

33. rhEPO in patients with anemia and congestive heart failure
   D. S. Silverberg, D. Wexler, A. Iaina, S. Steinbruch,
   Y. Wollman, and D. Schwartz
   793

34. Cost-effectiveness of treating cancer anaemia
   P. Cornes
   813

Addendum
   851

Index
   853
Recombinant Human Erythropoietin (rhEPO) in Clinical Oncology
Scientific and Clinical Aspects of Anemia in Cancer
Nowroussian, M.R. (Ed.)
2008, XVIII, 866 p., Hardcover
ISBN: 978-3-211-25223-9