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4.6 Safety of retroviral vectors: insertional mutagenesis4.7 Gene therapy of X-linked SCID; 4.8 Retroviral cancer gene therapy; 4.9 Immunomodulatory approaches; 4.10 Conclusions; References; 5 Lentiviral vectors for cancer gene therapy; 5.1 Development of lentiviral vectors (LV); 5.2 Targeting of transgene expression; 5.3 Host immune responses to LV and their transgene; 5.4 Transgenesis; 5.5 Haematopoietic stem cell gene transfer; 5.6 Cancer treatment by LV; 5.7 Approved clinical trials using LV; 5.8 Conclusions; References; 6 Poxviruses as immunomodulatory cancer therapeutics
6.1 Introduction6.2 General features of poxvirus structure and biology; 6.3 Clinically applicable poxviruses; 6.4 Poxviruses as potential cancer therapeutics; 6.5 Clinical experience with poxviruses; 6.6 Conclusions; References; 7 Oncolytic herpes simplex viruses; 7.1 Introduction; 7.2 Herpes simplex virology; 7.3 Properties of HSV relevant to oncolytic virus therapy; 7.4 Mutations giving tumour-selective replication; 7.5 Oncolytic HSV expressing fusogenic membrane glycoproteins (FMG); 7.6 Prodrug activation therapy and oncolytic HSV
7.7 Combination of oncolytic HSV with immunomodulatory gene expression

Sommario/riassunto

In the last decade there has been an explosion of interest in viral therapies for cancer. Viral agents have been developed that are harmless to normal tissues but selectively able to kill cancer cells. These agents have been endowed with additional selectivity and potency through genetic manipulation. Increasingly these viruses are undergoing evaluation in clinical trials, both as single agents and in combination with standard chemotherapy and radiotherapy. This book provides a comprehensive yet succinct overview of the current status of viral therapy of cancer. Chapters coherently present
