

Table 1.3 FDA-Approved Anticancer Drugs Described in Chapter 4

Drug	Mechanism of Action	Approval Date (First Indication)
Actinomycin D (Cosmege [®])	ROS generation	1964
Bleomycin (Blenoxane [®])	ROS generation	1973
Doxorubicin (Adriamycin [®])	ROS generation	1974
Daunomycin (Cerubidine [®])	ROS generation	1979
Idarubicin (Idamycin [®])	ROS generation	1990
Valrubicin (Valstar [®])	ROS generation	1998
Porfimer sodium oligomer (Photophrin [®])	Photodynamic therapy of cancer	1995
Epirubicin (Ellence [®])	ROS generation	1999
Methoxsalen (Uvadex [®])	Non-porphirin photosensitizers	1999
⁹⁰ Y-ibritumomab tiuxetan (Zevalin [®])	Radiolabeled monoclonal antibody	2002
¹¹¹ In-capromab pendetide (ProstaScint [®])	Radiolabeled monoclonal antibody	2002
¹³¹ I-tositumomab (Bexxar [®])	Radiolabeled monoclonal antibody	2003
ALA (Levulan [®])	Photosensitizer	2004
Amifostine (Ethiol [®])	Radioprotector	2008
Alpharadin (Xofigo [®] , ²³³ RaCl ₂)	Radiopharmaceutical	2013

Table 1.4 FDA-Approved Anticancer Drugs Described in Chapters 5 and 6

Drug	Mechanism of Action	Approval Date (First Indication)
Mechlorethamine (Mustargen [®])	DNA alkylation	1949
Triethylenemelamine (Tetramine [®])	DNA alkylation	1953
Busulfan (Myleran [®])	DNA alkylation	1954
Chlorambucil (Leukeran [®])	DNA alkylation	1957
Cyclophosphamide (Cytosan [®])	DNA alkylation	1959
Thiotepa (Thioplex [®])	DNA alkylation	1959
Melphalan (L-PAM, Alkeran [®])	DNA alkylation	1959
Uracil mustard	DNA alkylation	1962
Pipobroman (Vercyte [®])	Unknown	1966
Procarbazine (Matulane [®])	DNA alkylation	1969
Mitomycin C (Mutamycin [®])	Minor groove alkylation	1974
Dacarbazine (DTIC-Dome [®])	DNA alkylation	1975
Lomustine (CCNU, CeeNU [®])	DNA alkylation	1976
Carmustine (BiCNU [®])	DNA alkylation	1977
Cisplatin (Platinol [®])	DNA complexation	1978
Streptozotocin (Zanosar [®])	DNA alkylation	1982
Ifosfamide (Mitoxana [®])	DNA alkylation	1988
Carboplatin (Paraplatin [®])	DNA complexation	1989
Altretamine (Hexalen [®])	DNA alkylation	1990
Melphalan (Alkeran [®])	DNA alkylation	1993
Busulfan (Myleran [®])	DNA alkylation	1999
Temozolomide (Temodal [®] , Temodar [®])	DNA alkylation	1999
Oxaliplatin (Eloxatin [®])	DNA complexation	2002
Bendamustine (Ribomustin [®])	DNA alkylation	2008