

Table 1.5 FDA-Approved Anticancer Drugs Described in Chapters 7 and 8

Drug	Mechanism of Action	Approval Date (First Indication)
Actinomycin D (Cosmege [®])	DNA intercalation	1964
Doxorubicin (DOX, Adriamycin [®])	Topoisomerase II inhibition	1974
Daunomycin (DNR, Cerubidine [®])	Topoisomerase II inhibition	1979
Etoposide (VP-16-213)	Topoisomerase II inhibition	1983
Mitoxantrone (Novantrone [®])	Topoisomerase II inhibition	1988
Idarubicin (Idamycin [®])	Topoisomerase II inhibition	1990
Teniposide (Vumon [®])	Topoisomerase II inhibition	1992
Topotecan (Hycamtin [®])	Topoisomerase I inhibition	1996
Irinotecan (Camptosar [®])	Topoisomerase I inhibition	1996
Valrubicin (Valstar [®])	Topoisomerase II inhibition	1998
Epirubicin (Ellence [®])	Topoisomerase II inhibition	1999
Mithramycin A (Mithracin [®])	Histone methyltransferase inhibitor	1970
5-Azacitidine (Vidaza [®])	DNA methyltransferase inhibitor	2004
Decitabine (Dacogen [®])	DNA methyltransferase inhibitor	2006
Vorinostat (SAHA, Zolinza [®])	Histone deacetylase inhibitor	2006
Romidepsin (FK-228, Istodax [®])	Histone deacetylase inhibitor	2009
Belinostat (PDX-101, Beleodaq [®])	Histone deacetylase inhibitor	2014

Table 1.6 FDA-Approved Anticancer Drugs Described in Chapter 9

Drug	Mechanism of Action	Approval Date (First Indication)
Vincristine (Oncovin [®])	Microtubule polymerization inhibitor	1963
Vinblastine (Velban [®])	Microtubule polymerization inhibitor	1965
Estramustine (Estracyt [®] , Emcyt [®])	Microtubule polymerization inhibitor	1981
Paclitaxel (Taxol [®])	Microtubule-stabilizing agent	1992
Vinorelbine tartrate (Navelbine [®])	Microtubule polymerization inhibitor	1994
Docetaxel (Taxotere [®])	Microtubule-stabilizing agent	1996
Ixabepilone (Ixempra [®])	Microtubule-stabilizing agent	2007
Eribulin mesylate (Halaven [®])	Microtubule polymerization inhibitor	2010
Cabazitaxel (Jevtana [®])	Microtubule-stabilizing agent	2010

Table 1.7 FDA-Approved Anticancer Drugs Described in Chapters 10 and 11

Drug	Mechanism of Action	Approval Date (First Indication)
Trastuzumab (Herceptin [®])	HER-2 inhibitor	1998
Arsenic trioxide (Trisenox [®])	Apoptosis induction	2000
Imatinib mesylate (Gleevec [®])	Bcr-Abl inhibitor	2001