

Table 1.8 FDA-Approved Anticancer Drugs Described in Chapter 12

Drug	Mechanism of Action	Approval Date (First Indication)
Aldesleukin (Proleukin [®])	Modified human IL-2	1992
Rituximab (Rituxan [®])	Anti-CD20	1997
Recombinant interferon α -2b (Intron A [®])	Immunotherapeutic agent	1997
Denileukin diftitox (Ontak [®])	IL-2 receptor antagonist	1999
Alemtuzumab (Campath [®])	Anti-CD-52	2001
¹³¹ I-tositumomab (Bexxar [®])	Anti-CD20 with radioactive iodine	2003
Imiquimod (Aldara [®] , Zyclara [®])	Agonist of toll-like receptors 7 and 8	2004
Gardasil [®]	Cancer vaccine	2006
Plerixafor (Mozobil [®])	Chemokine receptor-4 (CXCR4) antagonist	2008
Cervarix [®]	Human papillomavirus vaccine	2009
Ofatumumab (Arzerra [®])	Anti-CD20	2009
Sipuleucel-T (Provenge [®])	Autologous vaccine	2010
Denosumab (Prolia [®])	Anti-RankL	2010
Brentuximab vedotin	Anti-CD30	2011
Ipilimumab (Yervoy [®])	Anti-CTLA-4	2011
Catumaxomab (Removab [®])	Anti-EpCAM, CD3, and Fc γ Rs	2011
Ziv-aflibercept (Zaltrap [®])	VEGF inhibitor	2011
Obinutuzumab (Gazyva [®])	Anti-CD20	2013
Ramucirumab (Cyramza [®])	VEGFR-2	2014
Pembrolizumab (Keytruda [®])	PD-1 receptor antibody	2014

Table 1.9 FDA-Approved Anticancer Drugs Described in Chapters 13–15

Drug	Mechanism of Action	Approval Date (First Indication)
Pegaspargase (Oncaspar [®])	Hydrolysis of circulating L-asparagine	1994
Liposomal doxorubicin (Doxil [®])	ROS generation, topoisomerase II inhibition	1995
Liposomal daunorubicin (DaunoXome [®])	ROS generation, topoisomerase II inhibition	1996
Liposomal cytarabine (Depocyt [®])	Inhibition of DNA strand elongation	1999
Gemtuzumab ozogamicin (Mylotarg [®])	Radical-induced DNA strand scission	2000
Pegfilgrastim (Neulasta [®])	Granulocyte colony-stimulating factor (G-CSF)	2002
Albumin-bound paclitaxel (Abraxane [®])	Microtubule stabilization	2005
Ibritumomab tiuxetan (⁹⁰ Y) (Zevalin [®])	Ionizing radiation	2009
Genexol-PM [®]	Microtubule stabilization	2010
Brentuximab vedotin (Adcetris [®])	(Antibody–drug conjugate)	2011
Marqibo [®]	(Liposomal vincristine)	2012
Oxorubicin liposome (LipoDox [®])	(Liposomal doxorubicin)	2013
Trastuzumab-DM1, ado-trastuzumab	Microtubule depolymerization	2013
Ado-trastuzumab emtansine (Kadcyla [®])	Microtubule depolymerization	2013
Tamoxifen (Nolvadex [®] , Valodex [®])	Selective estrogen receptor modulator (SERM)	1998