

Supplemental Table S1. Mechanisms of action of the drugs cited in this review

| Drug name | Type of drug | Mechanism of action |
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| Cisplatin [1] | Platinum-based drugs | Generates DNA damage by interacting with purine bases in DNA, with subsequent activation of several signaling pathways, ultimately leading to apoptosis. |
| Doxorubicin [2] | Anthracycline antineoplastic agents | Cytostatic effects attributed to DNA intercalation, DNA binding, and cross-linking, inhibition of topoisomerase II, and induction of apoptosis. |
| Epirubicin[2] | Anthracycline antineoplastic agents | Cytostatic effects attributed to DNA intercalation, DNA binding, and cross-linking, inhibition of topoisomerase II, and induction of apoptosis. |
| Miriplatin[3] | Liposoluble platinum complexes | Dichloro[(1R, 2R)-1, 2-cyclohexanediamine-N, N']platinum, the most abundant platinum compound released from miriplatin, induces apoptosis through formation of platinum-DNA adducts. |
| 5-FU[4] | Antimetabolite | Inhibits thymidylate synthase, blocking thymidine formation required for DNA synthesis. |
| Mitomycin [5] | Anticancer antibiotic | Inhibits DNA replication by inhibiting DNA division and by scission of DNA strands caused by reactive oxygen species. |
| Oxaliplatin [6] | Platinum-based drug | Generates DNA damage by interacting with purine bases in DNA with subsequent activation of several signaling pathways, ultimately leading to apoptosis. |
| Carboplatin [7] | Platinum-based drug | Cytotoxic DNA-damaging compound that causes DNA strand breaks, leading to apoptosis. |
| Methotrexate [8] | Antifolate | Inhibits dihydrofolate reductase, depleting folic acid necessary for nucleic acid synthesis, etc., thereby stopping tumor cell division or killing them. |
| Docetaxel [9] | Taxane anticancer agents | Promotes and stabilizes assembly of microtubules, preventing their depolymerization, and inhibitsingcancer cell proliferation. |
| Paclitaxel [9] | Taxane anticancer agents | Promotes and stabilizes assembly of microtubules, preventing their depolymerization, and inhibitsingcancer cell proliferation. |
| Nedaplatin [10] | Platinum-based drug | Generates DNA damage by interacting with purine bases in DNA, with subsequent activation of several signaling pathways, ultimately leading to apoptosis. |
| 6-mercaptopurine [11] | Purine antagonist | Inhibits de novo purine synthesis and acts as an antiproliferative agent by interfering with protein, DNA and RNA synthesis and promoting apoptosis. |
| Vincristine [12] | Vinca alkaloid | Induces cytotoxicity by binding to tubulin, resulting in microtubule depolymerization and metaphase arrest. |

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| Cyclophosphamide [13] | Alkylating agent | Preferentially alkylates the N7 position of guanine in DNA, inhibits DNA replication and protein synthesis, and suppresses cancer cell proliferation. |
| Chimeric antigen receptor T (CAR-T) cells [14] | CAR T cells | CARs are MHC receptor-independent and bind to cell surface-expressed target antigens, leading to T cell activation and potent anti-tumor effects. |
| Cytarabine [15] | Antimetabolite | Cytotoxic due to incorporation of ara-CTP into DNA and inhibition of DNA synthesis. |
| Topotecan [16] | Topoisomerase inhibitor | Inhibits DNA replication by inhibiting topoisomerase I, killing cancer cells. |
| Irinotecan [16] | Topoisomerase inhibitor | Inhibits DNA replication by inhibiting topoisomerase I, killing cancer cells. |
| Transferrin receptor ligand-targeted toxin conjugate (Tf-CRM107) [17] | Conjugated Toxins | A conjugate of transferrin and a point mutant of diphtheria toxin that selectively kills cells expressing high levels of the transferrin receptor. |
| TP-38 [17] | Conjugated Toxins | A chimeric protein that contains a fragment of <i>Pseudomonas</i> exotoxin and TGF- α . It binds to and selectively kills cells expressing high levels of epidermal growth factor receptor (EGFR). |
| IL13-PE38QQR [18] | Conjugated Toxins | A recombinant chimeric cytotoxin that contains IL-13 and a fragment of <i>Pseudomonas</i> exotoxin. It binds to and selectively kills cells expressing high levels of interleukin-13R alpha2 receptors. |
| Reovirus [17] | Oncolytic viruses | A genetically modified reovirus that preferentially infects and kills cancer cells over non-malignant cells. |
| LIPO-HSV-1-tk [17] | Liposomes | A liposomal vector that contains the herpesvirus thymidine kinase (tk) gene. Upon delivery of this gene, cells become sensitized to ganciclovir, a nucleoside analog that is clinically used as an antiviral. |
| CpG-28 [17] | Oligodeoxynucleotides | Acts as a bacterial pathogen-associated molecular pattern (PAMP) analog that interacts with TLR9 to stimulate immune responses activating anti-tumor immunity. |
| AP-12009 [17] | Oligodeoxynucleotides | Binds to and suppresses cells expressing the malignant factor, TGF β -2. |
| ¹³¹ I-chTNT-1/B MAb (Cotara) [19] | Chimeric antibody | A genetically engineered chimeric monoclonal antibody that binds to the DNA-histone H1 complex, and carries ¹³¹ I, which delivers beta particles locally, as well as gamma radiation to kill adjacent tumor cells. |
| Bevacizumab [20] | Molecular targeting drugs | Blocks angiogenesis and suppresses tumor cell proliferation by inhibiting tumor vascular endothelial growth factor A (VEGF-A). |
| Gemcitabine [21] | Antimetabolite | Taken up by cancer cells and phosphorylated by dioxycytidine kinase (DCK) to form gemcitabine triphosphate, which is incorporated into cellular DNA, inhibiting nuclear replication, and suppress cancer cell division and proliferation. |

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| Catumaxomab [22] | Molecular targeting drugs | A trifunctional monoclonal antibody with two antigen-binding sites, EpCAM and CD3, and a functional Fc domain that activates a complex antitumor immune reaction through various effector functions, such as anti-body-dependent cellular cytotoxicity, phagocytosis, and T cell-mediated cytotoxicity |
| SD-101 [23] | TLR9 agonists | Activates immune cells around the tumor (myeloid cells, B cells, etc.) to release various cytokines (tumor necrosis factor (TNF), IL-12, interferons (IFN) $\alpha/\beta/\gamma$ and IL-6, etc.) and promoting anti-tumor immunity. |
| Tilsotolimod [23] | TLR9 agonists | Activates immune cells around the tumor (myeloid cells, B cells, etc.) to release various cytokines (tumor necrosis factor (TNF), IL-12, interferons (IFN) $\alpha/\beta/\gamma$ and IL-6, etc.) and promoting anti-tumor immunity. |
| PV-10 [23] | Oncolytic viruses | Genetically modified polio virus that preferentially infects and kills cancer cells over non-malignant cells. |
| Talimogene laherparepvec (T-VEC) [23] | Oncolytic viruses | Genetically modified herpes simplex virus-1 (HSV-1) that preferentially infects and kills cancer cells over non-malignant cells. |
| CAVATAK [24] | Oncolytic viruses | Genetically modified coxsackievirus A21. It preferentially infects and kills cancer cells over non-malignant cells. |
| HF10 [24] | Oncolytic viruses | Genetically modified herpes simplex virus-1 (HSV-1). preferentially infects and kills cancer cells over non-malignant cells. |
| Pexastimogene devacirepvec (Pexa-Vec) [23] | Oncolytic viruses | Genetically modified vaccinia virus. It preferentially infects and kills cancer cells over non-malignant cells. |
| PVS-RIPO [24] | Oncolytic viruses | Genetically modified polio/rhinovirus. It preferentially infects and kills cancer cells over non-malignant cells. |
| DNX-2401 [23] | Oncolytic viruses | Genetically modified adenoviruses. It preferentially infects and kills cancer cells over non-malignant cells. |

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