Appendix: Standard of care drug regimens at clinically relevant dose and schedule.

Regimen	Patients	Preclinical (in vivo)	Schedule
CARBO/TOPO (Retinoblastoma)			
Carboplatin (CARBO)	6.5 mg/mL-min (AUC) IV	60 mg/kg IP	day 1 of courses 3, 4, 6, 7, 9, 10 - cycles q 21-28 days
Topotecan (TOPO)	140 ng/mL-hr (AUC) IV	1.25 mg/kg IP	days 1-5 of courses 1, 2, 5, 8, 11 - cycles q 21-28 days
CYCLO/TOPO (Neuroblastoma, Wilm's tumor, Rhabdomyosarcoma, Ewing sarcoma)			
Cyclophosphamide (CYCLO)	250 mg/m2 IV	50 mg/kg IP	days 1-5 q 21 days
Topotecan (TOPO)	0.75 mg/m2 IV	0.3125 mg/kg IP	daily on days 1-5 q 21 days
GEM/DOCE (Osteosarcoma, Soft Tissue Sarcoma)			
Gemcitabine (GEM)	675 mg/m2 IV	35 mg/kg IP	day 1 and day 8 q 21 days
Docetaxel (DOCE)	100 mg/m2 IV	5 mg/kg IV	day 8 q 21 days
ICE: IFOS/CARBO/ETOP (Neuroblastoma, Ewing sarcoma, Recurrent solid tumors)			
Ifosfamide (IFOS)	2000 mg/m2 IV	65 mg/kg IP	days 1-3 q 21 days
Carboplatin (CARBO)	8 mg/mL-min (AUC) IV	75 mg/kg IP	day 1 q 3 weeks
Etoposide (ETOP)	100 mg/m2 IV	7.5 mg/kg IP	days 1-3 q 21 days
IE: IFOS/ETOP (Osteosarcoma, Ewing sarcoma)			
Ifosfamide (IFOS)	2800 mg/m2 IV	90 mg/kg IP	days 1-5 q 21 days
Etoposide (ETOP)	100 mg/m2 IV	7.5 mg/kg IP	days 1-5 q 21 days
MAP: MTX/DOXO/CISPLAT (Osteosarcoma)			
Methotrexate (MTX)	12000 mg/m2	225 mg/kg IP	day 1 of weeks 4, 5, 9, 10, 16, 17, 21, 22, 26, 27, 31, 32
Doxorubicin (DOXO)	37.5 mg/m2 IV	6 mg/kg IP	days 1-2 of weeks 1, 6, 13, 18, 23, 28
Cisplatin (CISPLAT)	60 mg/m2	3 mg/kg IP	days 1-2 of weeks 1, 6, 13, 18

VAC: VCR/ACTINO/CYCLO (Rhabdomyosarcoma)			
Vincristine (VCR)	1.5 mg/m2 IV	0.5 mg/kg IP	day 1 weekly
Dactinomycin (ACTINO)	0.045 mg/kg IV	0.67 mg/kg	day 1 of each course q 21 days
Cyclophosphamide (CYCLO)	2200 mg/m2 IV	300 mg/kg IP	day 1 of each course q 21 days

VDC: VCR/DOXO/CYCLO (Ewing sarcoma, Rhabdoid Tumor, Multiple pediatric solid tumors)			
Vincristine (VCR)	1.5 mg/m2 IV	0.5 mg/kg IP	day 1 weekly
Doxorubicin (DOXO)	37.5 mg/m2 IV	6 mg/kg IP	days 1-2 q 3-4 weeks
Cyclophosphamide (CYCLO)	1200 mg/m2 IV	150 mg/kg IP	day 1 q 3-4 weeks

IRINO/TMZ (Ewing sarcoma, Neuroblastoma, Recurrent solid tumors)			
Irinotecan (IRINO)	50 mg/m2 IV	3.125 mg/kg IP	days 1-5 q 21 days
Temozolomide (TMZ)	100 mg/m2 IV	33 mg/kg PO	days 1-5 q 21 days

Human and preclinical (mouse) PK data was obtained from the literature or FDA drug approval review pharmacology and toxicology sections. The reported plasma AUC and total or apparent clearance (CL) values were used when possible.
In some instances where Ct plots were presented, these were digitized and subjected to basic noncompartmental analysis to derive AUC or CL values for matching the human values to the mouse equivalent exposure.
AUC from 0 to infinity (AUCinf) or the AUC over the dosing interval at steady state (AUCtau) were preferred parameters, but in some instances they were not available. In this case AUC from 0 to a specified time point or the last observed time point (AUC0-t, or AUClast) was used. Alternatively, AUCinf was estimated using the standard formula AUCinf = Dose/CL, under assumption of dose-proportional PK.
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When preclinical PK Shared Resource mouse plasma PK data were available for a compound, it was used along with the data from the literature.