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| **Subject No./ Date of primary dg /Age at dg/ Primary dg**  | **Disease course** | **Anti-cancer therapy** **(CTx, RTx, ITx)** | **Date of mono-****nuclear harvest/****Age at harvest/ PS at harvest** | **Thx 60 days prior to mononuclear harvest** | **Date of DC ITx initiation/ Stage of the disease at DC ITx initiation** |
| KDO-0101 11/201110 years Ewing sarcoma of the mandibleEWS/FLI1 positMts parietal bone | 1st relapse 09/2015, mts parietal bone2nd relapse 06/2017 locoregional relapse with mts progression - pelvis, spine, cranial bones, liver3rd progression 06/2018mts - pelvis, spine, cranial bones, liver | 1st line CTx - Euro Ewing 2008, 12/2011 - 10/2012Partial resection - primary tumor, 06/2012, 1st PR HD CTx Treo/Mel + APBSCT, 07/2012RTx mandible + parietal bone, 34 Gy + 45 Gy,09/2012 - 11/2012Euro Ewing 2008, maintenance CTx, 7 x VAC, 10/2012- 05/2013, 1st CRResection - mts parietal bone, 09/2015 , 2nd CR2nd line CTx - VCR/Irino + Pazopanib, 09/2015 - 04/2016RTx cranial bones 41 Gy, 01/2016 - 02/2016HD CTx Treo/Mel + APBSCT, 04/2016 CPM, 09/2016 - 06/2017Experimental ITx - 1st DC vac course, 19 doses 08/2016 - 06/2017Resection – mandible, 06/20173rd line CTx - Topo/CPM + Zoledronic acid,07/2017 - 09/2017, SDRTx of the mandible, cranial bones, pelvis - 21 Gy08/2017 - 09/20174th line CTx VBL weekly+Metformin, 01/2018 - 06/2018, SD Nivolumab every 2 weeks, 02/2018 - 06/2018Experimental ITx: 2nd DC vac course, 03/2018 - 11/2018, PD  | 07.01.201615 yearsKS 100  | D60 -> D0 Pazopanib 200 mg/day; TMP/SMT 920 mg/day/twice weeklyD58 -> D54 CTx cycle: VCR/IrinoD58 VCR 2 mg/dayD58 -> D54 Irino 76 mg/dayD51 VCR 2 mg/dayD44 VCR 2 mg/day D44 -> D37 Filgrastim 240 µg/day D30 -> D24 Cefixime 400 mg/day  | 29.08.20162nd CR KS 100 |
| KDO-0102 05/20126 yearsLocalizedhigh-grade osteosarcoma of the right distal femur | 1st relapse 04/2014mts of lungs and left tibia 2nd progression 11/2015mts lungs bilat 3rd progression 06/2016 mts of lungs bilat, thorax, abdomen  | 1st line CTx - AOST 0331, 05/2012 - 02/2013 Resection - primary tumor, 08/2012, 1st CR Mifamurtid 10/2012 - 04/2013Tibial biopsy 04/20142nd line CTx - Ifo/Eto + zoledronic acid 06/2014 - 01/2015, PR3rd line CTx - COMBAT III + Pazopanib,01/2015 - 09/2015, PDBiopsy - lung mts, 10/20154th line CTx - rechallenge therapy2 cycles HD MTX 10/2015 - 11/2015, PD 5th line CTx - VBL /CPM + Sunitinib, 12/2015 - 02/2016RTx lungs + left calf, 15 Gy + 36 Gy, 01/2016 - 02/2016Nivolumab - 4 doses, 03/2016 - 04/2016, PDRTx - lungs, 17.5 Gy, 06/2016Experimental ITx - DC vac course, 17 doses 01/2016 - 09/2016  | 01.12.201510 yearsLS 90 | D60 -> D0 TMP/SMT 920 mg/day/twice weeklyD46 MTX 12g/dayD45 -> D43 Ca-folinate 60 mg/dayD34 MTX 12 g/dayD33 -> D31 Ca-folinate 60 mg/day | 12.01.2016PD |
| KDO-0103 06/201513 yearsAlveolar rhabdomyosarcoma of the right calf Mts regional and supraregional lymph nodes | CR not achievedcontinuous progression | 1st line CTx - ARST08P1 + Pazopanib, 07/2015 - 10/2015Resection - primary tumor, 10/2015 2nd line CTx - ARST 0921 + TEM, 11/2015 - 01/2016RTx - primary tumor + regional lymph nodes, 34.4 Gy, 11/2015, PDCOMBAT III modifed + nivolumab, 01/2016 - 07/2016Experimental ITx - DC vac course, 4 doses 02/2016 - 03/2016 | 14.12.201514 yearsKS 90 | D60 -> D0 TMP/SMT 1320 mg/day/twice weeklyMirtazapinum 30 mg/dayLMWH 3800 IU/dayPregabalin 300 mg/dayD50 -> D40 Clindamycin 1200 mg/dayD38 -> D37 CTx cycle VDC + TEMD38 TEM 23.4 mg/dayD38 VCR 2 mg/day D38 -> D37 Doxo 44 mg/dayD38 CPM 1872mg/day D33 -> D24 Filgrastim 250 µg/dayD31 VCR 2 mg/day, D31 TEM 23.4 mg/dayD25 -> D20 RTx, total dose: 34.4 Gy D21 -> D17 Ifo 2808 mg/dayD21 -> D17 Eto 156 mg/dayD16 -> D7 Filgrastim 250 uq/dayD16 Triptorelin 11.25 mg | 09.02.2016PDKS 80 |
| KDO-0109 01/201410 yearsLocalized Ewing sarcoma of the left femur EWS/FLI1+  | 1st relapse 02/2016mts bones, lungs, bone marrow .  | 1st line CTx - EuroEwing 2008, 02/2014-12/2014reductions of IFO and ETO due to toxicitiesResection - primary tumor, 09/2014RTx - primary tumor, 29 Gy, 12/2014-01/20151st CR2nd line CTx - AEWS1031, 02/2016 - 03/2016, PD3rd line CTx - ARST08P1 + Sunitinib, 03/2016 - 06/2016Palliative RTx of Th6, 28Gy, 04/2016, PR | 24.03.201613 years KS 90 | D60 -> D0 TMP/SMT 720 mg/day/twice weekly Pazopanib 200 mg/2 dayLMWH 5700 IU/day D47 -> D35 AMX/CLA 1875 mg/dayD35 -> D31 CTx cycle VTCD35 VCR 2 mg/dayD35 -> D31 Topo 1.22 mg/dayD35 -> D31 CPM 407.5 mg/dayD29 VCR 2 mg/dayD10 -> D5 Acyclovir 2000 mg/day | Not treated |
| KDO-0111 11/20138 years Localized Ewing sarcoma of the left distal humerus  | 1st locoregional relapse 02/2016 | 1st line CTx - EuroEwing 2008, 12/2013 - 10/2014(Ifo neurotoxicity Gr.IV - switch to CPM)Resection - primary tumor, 05/2014 1st CRBiopsy - locoregional relapse, 02/20162nd line CTx - AEWS1031 + Votrient,02/2016-08/2016 RTx - primary tumor, 54Gy, 08/2016-09/2016Resection - locoregional relapse, 09/2016 , 2nd CRHD CTx Treo/Mel 10/2016Individualized CTx - Sunitinib every second day 12/2016-04/2018CYC week on/week off 04/2017-2/2019  | 09.05.201612 years KS 100 | D60 -> D0 TMP/SMT 1920 mg/day/twice weekly D60 -> D7 Pazopanib 200 mg/day D45 -> D41 CTx cycle VTC D45 VCR 2 mg/day D45 -> D41 Topo 1.25 mg/dayD45 -> D41 CPM 417.5 mg/dayD39 VCR 2 mg/day D36 -> D30 Filgarstim 300 µg/dayD19 -> D15 CTx cycle VTC D19 VCR 2 mg/day D19 -> D15 Topo 1.26 mg/dayD19 -> D15 CPM 422.5 mg/dayD13 -> D7 Filgarstim 300 µg/dayD12 VCR 2 mg/day  | Not treated |
| KDO-0114 12/201413 yearsSynovial sarcoma of the left thigh Mts lungs and retroperitoneum | 1st progression 10/2016mts left hemithorax  | 1st line CTx - ARST1321 + Metformin + Pazopanib12/2014 - 05/2015RTx - primary tumor 45Gy, 03/2015Resection - primary tumor, 05/2015 COMBAT III 05/2015 - 12/2016Thoracoscopic exstirpation of mts of the left hemithorax 10/20162nd line CTx - ARST08P1 – 1 cycle IE, 12/2016Palliative RTx - left hemithorax 15 Gy, 01/2017Palliative experimental thx valproate, metformin,Lipanthyl, sunitinib 12/2016 - 06/2017Experimental ITx - DC vac course, 11 doses01/2017 - 06/2017  | 12.12.201615 yearsKS 80 | D60 -> D0Carvediol 37 mg/dayFenofibrate 160 mg/dayMetformin 500 mg/day Cholecalciferol 2000 IU/day D60 -> D55, D50 -> D7CPM 50 mg/dayD4 -> D0 AMX/CLA 2 g/day | 18.01.2017PDKS 80 |
| KDO-0115 03/201510 yearsNeuroblastoma of the retroperitoneumSkeletal mts, bone marrow infiltration  | 1st progression 04/20162nd progression 11/2016 | 1st line CTx - ANBL 0532, 03/2015-10/2015 poor response after 4cycles MATIN 1st application 10.08.20152nd application 24.08.2015 HD CTx Bu/Mel + APBSC, 10/2015 RTx - primary tumor 26.4 Gy, 12/2015 - 01/2016 Retinoic acid 02/2016 - 05/2016, 4 cycles, PD2nd line CTx - METRO-NB2012, 05/2016 -10/20166 cycles, PD3rd line CTx - VBL, Celecoxib, Endoxan,Propranolol11/2016 - 06/2017 Experimental ITx - DC vac course, 9 doses 11/2016 - 03/2017 Palliative RTx - mts cranial bones 12 Gy, 02/2017 | 30.06.201611 yearsKS 80 | D60 -> D0 TMP/SMT 720 mg/day/twice weekly D44 -> D0 Celecoxib 400 mg/dayPropranolol 50 mg/dayD44 -> D28 CPM 25 mg/dayEto 13.25 mg/dayD30 VBL 1 mg/day | 16.11.2016PDKS 80 |
| KDO-0118 06/200513 yearsLocalized Ewing sarcoma of the spine C5-Th2EWS/FLI1 negatExtradural involvement  | 1st locoregional relapse 08/2016 EWSR1 gene disruption confirmed2nd locoregional progression 04/2017  | 1st line CTx - Euro Ewing 99, 07/2005 - 12/2005CR HD CTx + APBSC 01/2006RTx - primary tumor 49.2 Gy, 03/2006 - 04/20062nd line CTx - AEWS1031, 08/2016 - 02/20172 cycles VTC - SD2 cycles VCR/IRINO - PR | 05.01.201724 yearsKS 100 | D60 -> D0 TMP/SMT 1920 mg/day/twice weekly D60 -> D40Sunitinib 25 mg/dayD48 -> D44 CTx cycleVCR/IrinoD48 VCR 2 mg/dayD48 -> D44 Irino 78 mg/day | 20.2.2017PRKS 100 |
| KDO-0119 10/201612 yearsAlveolar rhabdomyosarcoma Primum ignotumMts bones and bone marrow  | Without relapse | 1st line CTx - ARST08P1 + TEM, 10/2016 - 05/2018TEP left 11/2016, TEP right 12/2016Maintenance CTx - EpSSG RMS 2005, VNR + CPM 05/2018 – ongoingExperimental ITx - DC vac course, 22 doses4/2018 – ongoing | 03.04.201712 yearsKS 70 | D60 -> D28, D13 -> D1 LMWH 2000 IU/day D60 -> D0 TMP/SMT 720 mg/day/twice weekly D51 -> D50 CTx cycle VDCD51 VCR 1.74 mg/dayD51 -> D50 Doxo 43.5 mg/dayD51 CPM 1392 mg/dayD51 TEM 11.6 mgD50 Zoledronic acid 4 mg/dayD32 VCR 1.74 mg/dayD32 TEM 11.6 mg/dayD28 -> D18 Pip/tazo 9.6 g/day, D28 -> D18 Ami 420 mg/dayD25 -> D18 VAN 1.2 g/dayD25 -> D18 AmphoB 160 mg/dayD18 -> D13 AMX/CLA - 1 g/dayD18 -> D13 Cipro 500 mg/dayD9 -> D8 Filgrastim 150 µg/day | 11.04.2018PRKS 80 |
| KDO-0120 09/20168 yearsHigh-grade osteoblastic osteosarcoma of the left distal femurMts lungs bilat | Without relapse  | 1st line CTx - AOST 0331, 10/2016 - 07/2017Resection - primary tumor, 03/2017 1st CRCOMBAT III 11/2017 – ongoing  | 16.03.20178 yearsKS 80 | D60 -> D0 TMP/SMT 720 mg/day/twice weekly Citalopram 10 mg/day Itopridi hydrochloridum 150 mg/day D54 MTX 11 g/dayD53 -> D-50 Ca-folinate 60 mg/dayD44 MTX 11 g/dayD43 -> D40 Ca-folinate 60 mg/day D34 -> D33 CTx cycle D34 -> D33 Doxo 34 mg/dayD34 -> D33 Cisplatin 54 mg/day | Not treated |
| KDO-0121 11/201614 yearsEwing sarcoma of the pelvis, EWS/FLI1 + Mts - bones, bone marrow, lungs, meninges  | 1st progression 06/2017 mts - bones, bone marrow | 1st line CTx - Euro Ewing 2008, 11/2016 - 05/2017- after 5th VIDE VGPR, only residual PET positivity in the primary tumorBiopsy - residual tumor, 05/2017, 20% viability | 01.06.201715 yearsKS 80 | D60 -> D0 Sertraline 50 mg/dayD60 -> D0 TMP/SMT 720 mg/day/twice weekly D48 -> D46 CTx cycle VIDED48 VCR 0.22 mg/dayD48 -> D46 Ifo 3840 mg/dayD48 -> D-46 Doxo 25.6 mg/dayD48 -> D46 Eto 192 mg/dayD35 -> D30 Filgrastim 175 µg/day D34 Zoledronic acid 4 mg/dayD18 Triptorelin 11.25 mg  | Not treated |
| KDO-0122 08/201413 yearsEwing sarcoma of the left proximal tibia, EWS/FLI1+Mts of lungs  | 1st relapse 10/2016skip mts of left proximal femur, mts of lungs2nd relapse 07/2018mts - left thoracal wall, pelvis3rd progression12/2018mts -vertebrae, pelvis, bone marrow, lungs  | 1st line CTx - Euro Ewing 2008, 08/2014 - 07/2015Resection - primary tumor, 02/2015, 1st CRRTx - lungs 18 Gy, 07/2015Biopsy - femur mts 12/20162nd line CTx - VTC cycles, 01/2017 - 05/2017Radical resection - tumor residuum, 05/2017HD CTx Treo/Mel 06/2017, 2nd CRPost-consolidation maintenance therapy VBL, Celecoxib, CPM, 10/2017 - 07/2018 Biopsy - left thoracal wall 07/20183rd line CTx - 3x Irino/TZM, 08/2018 - 11/2018 PD4th line Thx - Experimental ITx: 2nd DC vac course, 2 doses, 12/2018Experimental Thx olaparib + nivolumab Palliative RTx 20 Gy, left hemithorax, 01/2019 | 23.03.201715 yearsKS 100 | D60 -> D0 LMWH 3800 IU/day TMP/SMT 1920 mg/twice weekly Fentanyl 25 µg/h D60 -> D51 Filgrastim 480 µg/day D44 -> D40 CTx cycle VTCD44 VCR 2 mg/dayD44 -> D-40 Topo 1.5 mg/day D44 -> D40 CPM 497.5 mg/dayD39 -> D28 Filgrastim 640 µg/dayD35 -> D27 Pip/Tazo 13.5 g/dayD35 -> D27 Amikacin 1.3 g/day D21 -> D17 CTx cycle VTCD21 VCR 2 mg/dayD21 -> D17 Topo 1.5 mg/day D21 -> D17 CPM 497.5 mg/dayD16 -> D5 Filgrastim 480 µg/dayD8 -> D2 Pip/Tazo 13.5 g/dayD8 -> D2 Amikacin 1.3 g/day  | Not treated |
| KDO-0124 12/201214 yearsLocalizedosteoblastic osteosarcoma of the right proximal tibia  | 1st relapse 09/2014mts of lungs bilat2nd relapse 01/2017mts of lungs | 1st line CTx - AOST 0331, 12/2012 - 11/2013 Resection - primary tumor + TEP 03/2013, 1st CRResection - lung mts 11/2014, 2nd CR2nd line CTx - 4 x Ifo/Eto, 02/2015 - 04/2015COMBAT III 05/2015 - 01/2017Resection - lung mts 02/20173rd line CTx - AOST 1321 + VBL + CPM, 02/2017 - 10/2017Experimental ITx - DC vac course, 16 doses05/2017 - 12/2017 | 20.03.201719 years KS 100 | D60 -> D0 Sertraline 50 mg/day Levocetirizin 5 mg/day Montelucast 10 mg/dayBudesonide/Formoterol 400 µg/day D33 -> D0 TMP/SMT 1920 mg/day/twice weekly D34 -> D26 CPM 50 mg/dayD34, D27, D20 VBL 4.8 mg/dayD34, D27, D20 Denosumab 120 mg/day | 05.05.20172nd mts relapse PR after resectionKS 100 |
| KDO-0131 08/201718yearsEmbryonal rhabdomyo-sarcoma of the pelvisMts of the prostate, seminal tubes, rectum, obturator muscles, penis, skeletal mts  | Without relapse | 1st line CTx - EpSSG RMS 2005, 09/2017 - 06/2018 Experimental ITx - DC vac course, 18 doses 06/2018 – ongoing | 11.01.201818 yearsKS 90 | D60 -> D0Sertraline 50 mg/day Gabapentin 600 mg/dayRanitidin 75 mg/day TMP/SMT 960 mg/day/twice weeklyD37 -> D36 CTx cycle IVAD37 VCR 1.8 mg/dayD37 Actino 1.8 mg/dayD37 -> D36 Ifo 5400 mg/day  | 08.06.2018PRKS 70 |
| KDO-0133 10/201116 yearsLocalizedosteosarcoma of the right proximal femur | 1st relapse 06/2015lung mts2nd relaps 06/2016lung mts 3rd relapse 01/2018 lung mts4th relapse 12/2018Lung mts | 1st line CTx - AOST 0331, 10/2011 - 07/2012Resection - primary tumor 01/2012, 1st CRRTx primary tumor 54 Gy, 02/2012Resection - lung mts 06/2015, 2nd CRResection - lung mts 06/2016, 3rd CR2nd line CTx - AOST 1321, 08/2016 - 12/2017+ Sunitinib from 11/2016+ Metformin from 10/2017RTx lungs 15 Gy, 02/2017 - 03/2017 Resection - lung mts 02/2018, 4th CR3rd line CTx - COMBAT III, 04/2018 - 12/2018Experimental ITx - 1st DC vac course, 6 doses 06/2018 - 09/20182nd DC vac course, 6 doses, 12/2018 - 2/2019Resection - lung mts, 12/2018, 5th CR | 09.04.201824 yearsKS 90 | D60 -> D0Budesonide/formoterol 1 breath/daySertraline 50 mg/day Digoxin 0.125 mg/dayEnalapril 5 mg/dayBisoprolol 1.25 mg/day  | 13.06.2018PDKS 100 |
| KDO-0135 11/20173 yearsHigh-risk neuro-blastoma of the left suprarenal glandMts bones, bone marrow, liver, cervical lymph nodes | Without relapse | 1st line CTx - ANBL0532, 11/2017 - 03/2018, SDPartial resection - primary tumor 02/2018 MATIN 04/2018, 1 cycle - not well tolerated, PR HD CTx + APBSC, 05/2018, PRRTx retroperitoneum + skeletal mts 45 Gy, 08/2018, PRImunotherapy - anti-GD2 + retinoic acid 11/2018 - 02/2019, PR | 11.02.20195 yearsLS 100 | D60 -> D0 TMP/SMT 240 mg/day/twice weeklyD60 -> D50 Dinutxmb 7.3 mg/dayD50 -> D36, Retinoic acid 120 mg/day D30 Gabapentin 200 mg/dayD29 Gabapentin 400 mg/dayD28 -> D18 Gabapentin 600 mg/dayD28 -> D23 Dinutxmb 7.3 mg/day D23 -> D18 Dinutxmb 7.3 mg/day D18 -> D4 Retinoic acid 120 mg/day | PendingNA  |
| KDO-0137 08/201616 yearsLocalizedsynovial sarcoma of the neck | 1st relapse02/2018Mts spine, pelvis, lungs 2nd progression 07/2018 skeletal mts3rd progression09/2018 skeletal mts4th progression12/2018 skeletal mts | 1st line CTx- Ifo/Doxo, 08/2016 - 01/2017RTx - primary tumor 50.4 Gy, 12/2016 - 01/20171st CR2nd line CTx - Modified COMBAT III, 04/2018 - ongoing+ Pazopanib starting 08/2018Palliative RTx: Th1 5x2.5 Gy, Th4 and Th8 and L2 5x4 Gy, pelvis l.sin 8x3 Gy, 07/2018 - 08/2018 Biopsy - pelvis mts 07/2018Experimental ITx - DC vac course, 2 doses07/2018 - 08/2018 Re-biopsy - mts os sacrum 10/2018  | 11.06.201818 yearsKS 90 | D60 -> D0 TMP/SMT 1920 mg/day/twice weekly D58 -> D0Celecoxib 600 mg/day Fenofibrate 267 mg/dayD58 -> D7 CPM 50 mg/dayD58, D51, D44, D37, D30, D23, D16, D9VBL 3.96 mg/day | 30.07.2018PDKS 90 |
| KDO-0139 09/201620 yearsHigh-grade osteoblastic osteosarcoma of the left distal femurSolitary lung mts  | 1st relapse05/2018mts of lungs bilat | 1st line CTx - AOST0331, 09/2016 - 05/2017Resection - primary tumor 12/20161st CRResection - lung mts 07/20182nd line CTx - AOST0331 – cycle IE 07/2018PR RTx - lung mts 15Gy, 08/20183rd line CTx - COMBAT III modified, 10/2018- 02/2019+ Olaparib 01/2019 - 02/2019Experimental ITx - DC vac course, 6 doses11/2018 - 02/2019  | 24.09.201822 yearsKS 100 | D53 -> D49 CTx cycle Ifo/Eto D53 -> D49 Ifo 4704 mg/dayD53 -> D49 Eto 168 mg/dayD53 -> D49 Uromitexan 5 g/dayD53 -> D49 Flonidan 10 mg/dayD51 -> D40, D30 -> D28 RTx lungs, total dose 15 GyD48 -> D0 TMP/SMT 1920 mg/day/twice weekly Fludrocortison 0.2 mg/dayD48 -> D38 Filgrastim 300 µg/day D40 -> D32 Cefepime 8 g/day D40 -> D32 Amikacin 7.2 g/dayD33 -> D29 CTx cycle Ifo/Eto D33 -> D29 Eto 165 mg/day D33 -> D29 Ifo 4620 mg/dayD33 -> D29 Uromitexan 5 g/dayD33 -> D29 Flonidan 10 mg/dayD40 Triptorelin 11.25 mg | 28.11.2018SDKS 90 |
| KDO-0141 09/201518 yearsLocalizedsynovial sarcoma of the left calf  | 1st relapse 06/2018Mts lungs | 1st line CTx - 3 cycles Ifo/Doxo, 09/2015 - 11/2015, SD Amputation - left femur 12/2015 1st CR Metronomic therapy: CPM+metformin, 03/2016 - 06/2018Resection - lung mts 08/2018 2nd line CTx - COMBAT III modified, 08/2018 - 02/2019, + Crizotinib 10/2018 - 02/2019RTx - lungs 18 Gy, 10/2018 - 11/2018 Experimental ITx - DC vac course, 5 doses12/2018 - 02/2019 | 18.10.201822 yearsKS 70 | D60 -> D0 TMP/SMT 1920 mg/day/twice weeklyBetaxolol 20 mg/dayCortisol 9 mg/dayD50, D42, D35, D28, D21, D14VBL 4 mg/day D42 -> D7 Eto 25 mg/day D50 -> D0 Celecoxib 800 mg/day Cholecalciferol 250 IU/day Fenofibrate 267 mg/day | 21.12.2018SDKS 70 |
| KDO-0142 09/20172 yearsNeuroblastoma of the right retroperitoneumMts bones, bone marrow | 1st locoregional progression7/2018 2ndlocoregional progression10/2018  | 1st line CTx - ANBL0532, 09/2017- 03/2018Subtotal resection - primary tumor 01/2018HD CTx Bu/Mel 03/2018 RTx retroperitoneum 30.6 Gy, 04/2018 - 05/2018 Retinoic acid - 1 cycle 06/20182nd line CTx - ANBL 1221 - 3 cycles T/Irino + Dinutxmb (antiGD2), 08/2018 - 11/20183rd line CTx - Topo/CPM, 11/2018 - 01/2019 Nivolumab 01/2019 - ongoing | 27.08.20183 yearsKS 100 | D60 -> D0 TMP/SMT 960 mg/day/twice weekly D27 -> D23 Irino 30.5 mg/dayD27 -> D23 TZM 61 mg/dayD32 Gabapentin 200 mg/dayD31 Gabapentin 400 mg/dayD30 -> D16 Gabapentin 600 mg/dayD26 -> D21 Dinutxmb 6.5 mg/dayD21 -> D16 Dinutxmb 6.5 mg/day | Not treated |
| KDO-0143 05/20041 yearLocalizedembryonal rhabdomyoma-sarcoma of pelvis | 1st locoregional relapse02/20142nd locoregional relapse05/2018 3rd locoregional progression 01/2019  | 1st line CTx - 2x VCR/Irino, 6x IVA, 05/2004 - 01/2005Resection – pelvic tumor residuum 10/2004, 1st CRBiopsy - pelvic relapse 02/20142nd line CTx - 7x VCR/Irino/TZM, 02/2014 - 09/2014Resection – pelvic tumor residuum, 06/2014, 10/2014RTx pelvis 50.4 Gy 12/2014 - 01/2015Maintenance CTx - Vinorelbine + CPM 10/2014 - 10/2015, 2nd CRResection - radical cystectomy, hysterectomy, colpectomy, bilateral urethrostomy 07/20183rd line CTx - rEECur - Topo/CYC, 08/2018 - 12/2018Biopsy – pelvic residuum + transversostomy 01/2019Palliative RTx pelvis 18 Gy, 01/20194th line CTx - ARST 0921: Vinorelbine/CPM 02/2019 | 13.09.201815 yearsKS 100 | D41 -> D0 LMWH 5700 IU/dayD43, D15 Pentamidine 220 mg/dayD41 -> D37 CTx cycle Topo/CPMD41 -> D37 Topo 1.19 mg/day D41 -> D37 CPM 397.5 mg/dayD21 -> D17 CTx cycle Topo/CPMD21 -> D17 Topo 1.19 mg/dayD21 -> D17 CPM 397.5 mg/dayD28 -> D21 Acyclovir 2 g/dayD28 -> D22 Cefepime 4 g/dayD28 -> D22 Amikacin 850 mg/day | PendingNA |
| KDO-0144 10/201418 yearsLocalizedEwing sarcoma of the left tibiaEWS/FLI1+  | 1st relapse 07/2018 mts lungs  | 1st line CTx - EuroEwing 2008, 11/2014 - 11/2015Resection - primary tumor 05/2015, 1st CR Resection - lung mts 08/20182nd line CTx - 2x Irino/TZM, 08/2018 - 10/2018SD3rd line CTx – rEECur: Topo/CPM, 10/2018 - 12/2018 4th line CTx - modified COMBAT III, 01/2019 + Valproate 02/2019  | 22.10.201822 yearsKS 100 | D54 -> D0 TMP/SMT 1920 mg/day/twice weekly D54 -> D50 CTx cycle Irino/TZMD54 -> D50 TZM 200 mg/dayD54 -> D50 Irino 95 mg/dayD36 -> D27 Cefixime 800 mg/dayD34 -> D30 CTx cycle Irino/TZMD34 -> D30 TZM 200 mg/dayD34 -> D30 Irino 95 mg/day | Not treated |
| KDO-0147 01/20163 yearsNeuroblastoma of the right suprarenal glandMts in bones | 1st progression of MIBG score 04/20172nd progression02/2019 | 1st line CTx - Rapid COJEC, 01/2016 - 06/2016MATIN 06/2016 - 07/2016, 1st PR HD CTx Bu/Mel + APBSC 10/20162nd line CTx - 1 cycle Topo/CPM 01/20173rd line CTx - RIST – 2 cycles, 2/2017- 04/2017, PD 4th line CTx - METRO-NB2012, 05/2017 - 12/2018, 2nd PRExperimental ITx -DC vac course, 02/2019 - ongoing | 26.11.20186 yearsLS 100 | D60 -> D0Propranolol 30 mg/day Levothyroxine 37.5 µg/dayD60 -> D47Celecoxib 200 mg/day | 20.02.2019PDLS 100 |

**Chemotherapy agents (alphabetically):** Bu – busulphan**;** CPM – cyclophosphamide**;** Doxo – doxorubicin; Eto – etoposide**;** HD MTX – high dose methotrexate; Ifo – ifosfamide; Irino - irinotecan; MATIN – therapeutic MIBG; MIBG - meta-iodobenzylguanidine, radiopharmaceutical; Mel – melphalan; MTX – methotrexate**;** TEM - temsirolimus **;** Topo – topotecan; Treo – treosulphan**;** TZM – temozolomide;VBL – vinblastin**;** VCR – vincristine**.**

**Chemotherapy cycles (alphabetically):** Bu/Mel - high-dose chemotherapy regimen – busulphan and melphalan; Ifo/Eto – chemotherapy cycle – ifosfamide, etoposide; Irino/TZM – chemotherapy cycle – irinotecan, temozolomide**;** IVA – chemotherapy cycle – Ifosfamide, Vincristine, Actinomycin; Topo/CPM- chemotherapy cycle – Topotecan, Cyclofosfamide**;** Treo/Mel – high-dose chemotherapy regimen – treosulfan and melphalan; VAC – chemotherapy cycle - vincristine (1.5 mg/m2/day, d1), actinomycin (0.75 mg/m2/day, d1, d2), cyclophosphamide (1500mg/m2/day, d1);VAI - vincristine (1.5 mg/m2/day, d1), actinomycin (0.75 mg/m2/day, d1, d2), ifosfamide (3.0 g/m2/day, d1, d2); VCR/Irino – chemotherapy cycle – Vincristine, Irinotecan; VDC – chemotherapy cycle – Vincristine (1.5mg/m2/day, d1), Doxorubicin (36 mg/m2/day, d1-2), Cyclophosphamide (1160 mg/m2/day, d1)**;** VIDE – chemotherapy cycle - vincristine (1.5 mg/m2/day, d1), ifosfamide (3.0 g/m2/day, d1-3), doxorubicin (20 mg/m2/day, d1-3), etoposide (150 mg/m2/day, d1-3)**;** VTC – chemotherapy cycle – Vincristine (1.5 mg/m2/day, d1), Topotecan (0.8 mg/m2/day, d1-5), Cyclofosfamide (250 mg/m2/day, d1-5).

**Chemotherapy protocols:** AEWS1031 protocol (Ewing sarcoma):combination of vincristine (1.5 mg/m2/day, d1 in weeks 1, 2, 5, 6, 9, 10), doxorubcin (37.5 mg/m2/day, d1, d2 in weeks 1, 5, 9), cyclophosphamide (1200 mg/m2/day, d1 in weeks 1, 5, 9), ifosfamide (1800 mg/m2/day, d1-d5 in weeks 3, 7, 11), etoposide (100 mg/m2/day, d1-d5 in weeks 3, 7, 11)**.** ANBL 0532 protocol (neuroblastoma): combination of cyclophosphamide (cycle 1,2 - 400 mg/m2/day, d1-d5, cycle 4,6 -2100 mg/m2/day, d1-d2), topotecan (cycle 1, 2 - 1.2 mg/m2/day, d1-d5), cisplatin (cycle 3, 5 - 50 mg/m2/day, d1-d4), etoposide (cycle 3, 5 - 200 mg/m2/day, d1-d3), doxorubicin (cycle 4, 6 - 25 mg/m2/day, d1-d3), vincristine (cycle 4, 6 - 0.67 mg/m2 or 0.022 mg/kg/day, d1-d3)**.** AOST 0331 protocol (osteosarcoma): combination of cisplatin (60mg/m2/day, d1-d2), doxorubicin (37.5mg/m2/day, d1-d2), methotrexate (12g/m2/day, d1), cycle Doxo/Cisplatin – weeks 1, 6, 12, 17, cycle Doxo – weeks 22, 26, cycle methotrexate – weeks 4, 5, 9, 10, 15, 16, 20, 21, 24, 25, 28, 29. AOST 1321 - protocol (osteosarcoma): repeated dose of Denosumab = RANKL inhibitor, cycle 1: denosumab 120mg s.c. d1, d8, d15, cycle 2-26: denosumab 120mg s.c. d1. ARTST 08P1 protocol (rhabdomyosarcoma): combination of vincristine (1.5 mg/m2/day, cycle 1 – d1, d8, d15; cycles 2, 3, 5, 7 – d1, d8; cycle 9 – d1, d8, d15; cycle 10, 12, 14 – d1, d8; cycles 15, 16, 18 – d1; cycle 17 - d1, d8, d15; cycles 19, 20 – d1, d8), irinotecan (50 mg/m2/day, cycles 1, 2, 9, 10, 19, 20 – d1-5), ifosfamide (1800 mg/m2/day; cycles 4, 6, 8, 11, 13 – d1-5), etoposide (100 mg/m2/day; cycles 4, 6, 8, 11, 13 – d1-5), doxorubicin (37.5 mg/m2/day; cycles 3, 5, 7, 12, 14 – d1, 2), cyclophosphamide (1200 mg/m2/day; cycles 3, 5, 7, 12, 14-18 – d1), actinomycine (0.045 mg/kg/day; cycles 15-18 – d1). ARST 0921 protocol (refractery or relapsed rhabdomyosarcoma): *regimen A* - 12 cycles vinorelbine (25 mg/m2/day d1, d8), cyclophosphamide (1200 mg/m2/day, d1), bevacizumab (15 mg/kg/day, d1); *regimen B -* 12 cycles vinorelbine (25 mg/m2/day, d1, d8), cyclophosphamide (1200 mg/m2/day, d1), temsirolimus (15 mg/m2/day d1, d8, d15). ARST 1321 protocol (non-rhabdomyosarcoma soft tissue sarcomas**)**: cycle of ifosfamide (2500 mg/m2/day, 3 doses), doxorubicin (37.5 mg/m2/day, 2 doses ) every 3 weeks, pazopanib 350 mg/m2 daily in weeks 1 – 25. EpSSG RMS 2005 protocol (rhabdomyosarcoma): combination of IVA – ifosfamide (3 g/m2/day, d1-2), vincristine (1.5 mg/m2 on d1 in weeks 1-7), actinomycin (1.5 mg/m2, d1), doxorubicin (30 mg/m2, d1-2 for courses 1-4); courses A,B,C,D – combination of cycles IVA and IVA doxorubicin. Euro Ewing 99 protocol (Ewing sarcoma): combination of cycles VIDE, VAI, VAC according to subgroup. Euro Ewing 2008 protocol (Ewing sarcoma): combination of cycles VIDE, VAI, VAC according to subgroup. Rapid Cojec protocol (neuroblastoma): Three different courses are given every 10 days. Course A starts on days 0 and 40, course B on days 10, 30, 50 and 70 and course C on days 20 and 60, *ourse A* - vincristine (1.5 mg/m² , maxium dose 2 mg), carboplatin (750 mg/m²), etoposide (2 x 175mg/m²), *course B* - vincristine (1.5 mg/m², maximum dose 2 mg), cisplatin (80 mg/m²/ctn over 24 hours), *course C* - vincristine (1.5 mg/m², maximum dose 2 mg), etoposide (2 x 175mg/m²), cyclophosphamide (2 x 1050 mg/m²). rEECur protocol (relapsed soft tissue sarcoma): Cycles topotecan/cyclophosphamide (topotecan 0.75 mg/m2/day, d1-5; cyclophosphamide 250 mg/m2/day, d1-5), cycles irinotecan/temozolomide (irinotecan 50 mg/m2/day, d1-5; temozolomide 100 mg/m2/day, d1-5). RIST protocol (Neuroblastoma): Combination of rapamycin (3 mg/m2 on d1 and 1mg/m2, d2-4), dasatinib (300 mg/m2/day, d1-4), irinotecan (50 mg/m2 i.v.), temozolomide (150 mg/m2 p.o./day, d1-5).

**Long term metronomic treatment:** COMBAT III: Year I - celecoxib p.o. (400 mg/m2/day, d1-78), etoposide p.o. (25 mg/m2/day, d1-35), temozolomide p.o. (30 mg/m2/day, d36–77), fenofibrate p.o. (100 mg/m2/day, d1-78), ergocalciferol (1500U/m2/day, d1-78), bevacizumab (10mg/kg/day, d1, d15, d29, d43, d57, d71); Year II - celecoxib p.o. (400 mg/m2/day, d1-78), etoposide p.o. (25 mg/m2/day, d1-35), cis-retinoic acid p.o. (100 mg/m2/day, d1-14, d29-42, d57-70), fenofibrate p.o. (100 mg/m2/day, d1-78), ergocalciferol (1500U/m2/day, d1-78). Year III - celecoxib p.o. (400 mg/m2/day, d1-78), cis-retinoic acid p.o. (100 mg/m2/day, d1-14, d29-42, d57-70), fenofibrate p.o. (100 mg/m2/day, d1-78), ergocalciferol (1500U/m2/day, d1-78). METRO-NBL2012: Metronomic treatment (neuroblastoma): Treatment consists of eight alternating 28-day-cycles of PCCVE and PCCV followed by five cycles PCCV resulting in a total of 13 cycles (364 days of treatment) PCCVE: propranolol cycle 1 ( 0.5 mg/kg/day p.o. d1, 1 mg/kg/day p.o. d2, 2 mg/kg/day p.o. d3-28), all further cycles (2 mg/kg/day p.o., maximum total daily dose 120 mg, divided in 2 doses per day, d1–28), celecoxib (400 mg/m2xd p.o., maximum total daily dose 800 mg, divided in 2 doses per day. d1-28), cyclophosphamide (loading dose 500 mg/m2 i.v., d1, all other cycles 25 mg/m2/day p.o., maximum total daily dose 50 mg, d1-28); vinblastine (3 mg/m2/day i.v., maximum total daily dose 6 mg, d1, d15, every two weeks), etoposide (25 mg/m2/day p.o., maximum total daily dose 50 mg, d1-21). PCCV: propranolol (2 mg/kg/day p.o., maximum total daily dose 120 mg, divided in 2 doses per day, d1–28), celecoxib (400 mg/m2/day p.o., maximum total daily dose 800 mg, divided in 2 doses per day, d1-28).

**Other abbreaviations (alphabetically):** Ami – amikacin**;** AmphoB – amphotericin B**;**  AMX/CLA – amoxicillin-clavulanate;APBSC – Autologous Peripheral Blood Stem Cell Transplantation**;** bilat – bilateral or bilaterally**;** Ca-folinate – calcium folinate; Cipro – ciprofloxacin;ctn – continually**;** CR – Complete Response**;** CTx – chemotherapy**;** d – day (in chemotherapeutic protocols)**;** D – day (in treatment prior to mononuclear harvest)**;** DC vac – dendritic cell-based vaccine**;** Dg – diagnosis**;** DOD – died of disease**;** Dinutxmb – dinutuximab; EWS/FLI-1 - a chromosomal 11;22 translocation**;** Gy – gray (unit)**;** ITx – immunotherapy**;** HD CTx – high-dose chemotherapy**;** IRS – intergroup rhabdomyosarcoma study**;** KS – Karnofsky score**;** LMWH – low molecular weight heparin**;** LS – Lansky score**;** M – month**;** mts – metastasis / metastases / metastatic**;** Negat – negative**;** Nmyc – N-myc oncoprotein**;** p.o. – per os**;** Pip/Tazo - Piperacillin/ tazobactam**;** PD – Progressive Disease; Posit – positive**;** PR – Partial Response**;** PS – performance status (Lansky/Karnofsky)**;** RTx – radiotherapy**;** SD – Stable Disease**;** Sub – subject**;** TEP – total endoprosthesis**;** Thx – therapy**;** TMP/SMT – trimethoprim / sulphamethoxazole**;** Y – year**;** Yrs – years