**Supplementary Table 1.** Combined application and clinical staging of MLN4924.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Intervention/treatment | Tumour | Phase | Sponsor | ClinicalTrials.gov Identifier | Status | Study Results | Enrolments | Date | Reference |
| Drug: BelinostatDrug: MLN4924 | Recurrent Acute Myeloid LeukaemiaRefractory Acute Myeloid Leukaemia | 1 | National Cancer Institute (NCI) | NCT03772925 | Recruiting | No Results | 45 | Study Start: February 28, 2019 Study Completion:July 1, 2021 | NO |
| Drug: MLN4924Drug: Azacitidinet | Acute Myelogenous LeukaemiaAcute Lymphoblastic Leukaemia | 2 | Millennium Pharmaceuticals, Inc. | NCT00911066 | Completed | Complete Response | 72 | Study Start:June 2009Study Completion:October 2013 | (107) |
| Drug: DecitabineDrug: MLN4924 | Acute Myeloid LeukaemiaRecurrent Acute Myeloid LeukaemiaRefractory Acute Myeloid LeukaemiaSecondary Acute Myeloid LeukaemiaTherapy-Related Acute Myeloid LeukaemiaUntreated Adult Acute Myeloid Leukaemia | 1 | City of Hope Medical Center | National Cancer Institute (NCI) | NCT03009240 | Recruiting | No Results | 30 | Study Start:July 5, 2017Study Completion:July 5, 2021 | NO |
| Drug: MLN4924Drug: Cytarabine | Acute Myelogenous LeukaemiaAdvanced Myelodysplastic Syndromes | 1 | Justin Watts, MD | Takeda | University of Miami | NCT03459859 | Recruiting | No Results | 18 | Study Start:May 21, 2018Study Completion:March 2023 | NO |
| Drug: MLN4924 | Advanced Nonhaematologic Malignancies | 1 | Millennium Pharmaceuticals, Inc. | NCT00677170 | Completed | Stable Disease | 62 | Study Start:April 2008Study Completion:December 2012 | 35 |
| Drug: MLN4924Drug: DocetaxelDrug: CarboplatinDrug: Paclitaxel | Advanced Solid Tumours | 1 | Millennium Pharmaceuticals, Inc. | Takeda  | NCT03057366 | Completed | Not Reported | 8 | Study Start:May 11, 2017Study Completion:November 5, 2018 | NO |
| Drug: MLN4924Drug: EtoposideDrug: PrednisoneDrug: VincristineDrug: CyclophosphamideDrug: DoxorubicinDrug: RituximabDrug: Filgrastim | Diffuse Large B-cell Lymphoma | 1/2 | National Cancer Institute (NCI) | National Institutes of Health Clinical Center (CC) | NCT01415765 | Withdrawn | No Results | 0 | Study Start:July 15, 2011Study Completion:January 7, 2014 | NO |
| Drug: MLN4924 | Haematologic MalignanciesMultiple MyelomaLymphomaHodgkin Lymphoma | 1 | Millennium Pharmaceuticals, Inc. | NCT00722488 | Completed | Partial Response | 56 | Study Start:June 2008Study Completion:September 2013 | (108) |
| Drug: Ixazomib CitrateDrug: MLN4924 | Recurrent Plasma Cell MyelomaRecurrent Plasma Cell Myeloma | 1 | National Cancer Institute (NCI) | NCT03770260 | Recruiting | No Results | 66 | Study Start:April 23, 2019Study Completion:April 23, 2021 | NO |
| Drug: CarboplatinDrug: PaclitaxelDrug:MLN4924 | Metastatic CholangiocarcinomaMetastatic Hepatocellular CarcinomaStage III Hepatocellular Carcinoma AJCC v8Stage III Intrahepatic Cholangiocarcinoma AJCC v8Stage IIIA Hepatocellular Carcinoma AJCC v8Stage IIIA Intrahepatic Cholangiocarcinoma AJCC v8Stage IIIB Hepatocellular Carcinoma AJCC v8Stage IIIB Intrahepatic Cholangiocarcinoma AJCC v8Stage IV Hepatocellular Carcinoma AJCC v8Stage IV Intrahepatic Cholangiocarcinoma AJCC v8Stage IVA Hepatocellular Carcinoma AJCC v8Stage IVB Hepatocellular Carcinoma AJCC v8Unresectable CholangiocarcinomaUnresectable Hepatocellular CarcinomaUnresectable Intrahepatic Cholangiocarcinoma | 2 | National Cancer Institute (NCI) | NCT04175912 | Recruiting | No Results | 52 | Study Start:January 31, 2020Study Completion:October 1, 2022 | NO |
| Drug: MLN4924Drug: PaclitaxelDrug: GemcitabineDrug: DocetaxelDrug: Carboplatin | Solid Tumours | 1 | Millennium Pharmaceuticals, Inc. | Takeda  | NCT01862328 | Completed | Not Reported | 64 | Study Start:June 10, 2013Study Completion:May 21, 2018 | NO |
| Drug: AzacitidineDrug: MLN4924Drug: Venetoclax | Acute Myeloid LeukaemiaAtypical Chronic Myeloid Leukaemia, BCR-ABL1-NegativeChronic Eosinophilic Leukaemia, Not Otherwise SpecifiedChronic Myelomonocytic LeukaemiaMyeloid NeoplasmsMyeloproliferative NeoplasmsMyeloproliferative Neoplasms, UnclassifiableChronic Neutrophilic Leukaemia | 1/2 | M.D. Anderson Cancer Center | National Cancer Institute (NCI) | NCT03862157 | Recruiting | No Results | 40 | Study Start:February 27, 2019Study Completion:January 1, 2024 | NO |
| Drug: MLN4924Drug: VincristineDrug: DexamethasoneDrug: PEG-asparaginaseDrug: DoxorubicinDrug: CytarabineDrug: MethotrexateDrug: Hydrocortisone | Refractory Acute Lymphoblastic LeukaemiaRelapsed Acute Lymphoblastic Leukaemia | 1 | Julio Barredo | Takeda | University of Miami  | NCT03349281 | Recruiting | No Results | 18 | Study Start:March 25, 2019Study Completion:March 2025 | NO |
| Drug: AzacitidineDrug: MLN4924 | Chronic Myelomonocytic LeukaemiaAcute Myeloid Leukaemia | 3 | Millennium Pharmaceuticals, Inc. | Takeda | NCT03268954 | Active | No Results | 454 | Study Start:November 28, 2017Study Completion:February 28, 2025 | NO |
| Drug: MLN4924Drug: DocetaxelDrug: CarboplatinDrug: Paclitaxel | Advanced Solid Neoplasms | 1 | Millennium Pharmaceuticals, Inc. | Takeda  | NCT03330106 | Active | No Results | 44 | Study Start:November 15, 2017Study Completion:February 26, 2021 | NO |
| Drug: AzacitidineDrug: MLN4924 | Chronic Myelomonocytic LeukaemiaAcute Myeloid Leukaemia  | 2 | Millennium Pharmaceuticals, Inc. | Takeda | NCT02610777 | Active | Not Reported | 120 | Study Start:April 14, 2016Study Completion:January 1, 2022 | NO |
| Drug: AzacitidineDrug: VenetoclaxDrug: MLN4924 | Acute Myelogenous Leukaemia | 2 | Ehab L Atallah | Medical College of Wisconsin | NCT04172844 | Recruiting | No Results | 24 | Study Start:January 13, 2020Study Completion:December 1, 2025 | NO |
| Drug: AzacitidineDrug: MLN4924 | Chronic Myelomonocytic LeukaemiaAcute Myeloid Leukaemia | 3 | Millennium Pharmaceuticals, Inc. | Takeda | NCT03268954 | Active | Not Results | 454 | Study Start:November 28, 2017Study Completion:February 28, 2025 | NO |
| Drug: MLN4924Drug: VenetoclaxDrug: Azacitidine | Acute Myeloid Leukaemia | 2 | Takeda | NCT04266795 | Recruiting | No Results | 150 | Study Start:October 13, 2020Study Completion:March 18, 2024 | NO |
| Drug: IbrutinibDrug: MLN4924 | B-Cell Prolymphocytic LeukaemiaRecurrent Chronic Lymphocytic LeukaemiaRecurrent Diffuse Large B-Cell LymphomaRecurrent Follicular LymphomaRecurrent Lymphoplasmacytic LymphomaRecurrent Mantle Cell LymphomaRecurrent Marginal Zone LymphomaRecurrent Non-Hodgkin LymphomaRecurrent Small Lymphocytic LymphomaRefractory Chronic Lymphocytic LeukaemiaRefractory Diffuse Large B-Cell LymphomaRefractory Follicular LymphomaRefractory Lymphoplasmacytic LymphomaRefractory Mantle Cell LymphomaRefractory Marginal Zone LymphomaRefractory Non-Hodgkin LymphomaRefractory Small Lymphocytic Lymphoma | 1 | City of Hope Medical Center | National Cancer Institute (NCI) | NCT03479268 | Recruiting | No Results | 30 | Study Start:March 22, 2018Study Completion:April 2, 2024 | NO |
| Drug: MLN4924Drug: Azacitidine | Acute Myeloid Leukaemia | 2 | Milton S. Hershey Medical Center | Millennium Pharmaceuticals, Inc. | Takeda | NCT03709576 | Terminated | Not Reported | 3 | Study Start:July 18, 2018Study Completion:July 22, 2019 | NO |
| Drug: IrinotecanDrug: Irinotecan HydrochlorideDrug: MLN4924Drug: Temozolomide | Recurrent LymphomaRecurrent Malignant Solid NeoplasmsRecurrent Primary Central Nervous System NeoplasmsRefractory LymphomaRefractory Malignant Solid NeoplasmsRefractory Primary Central Nervous System Neoplasms | 1 | Children´s Oncology Group | National Cancer Institute (NCI) | NCT03323034 | Recruiting | No Results | 56 | Study Start:November 13, 2017Study Completion:December 1, 2021 | NO |
| Drug: MLN4924Drug: Docetaxel | Non-Small-Cell Lung Cancer | 2 | University of Michigan Rogel Cancer Center | NCT03228186 | Recruiting | No Results | 37 | Study Start:March 5, 2018Study Completion:March 1, 2021 | NO |
| Drug: AzacitidineDrug: CytarabineDrug: Fludarabine PhosphateDrug: MethotrexateDrug: MLN4924Drug: Therapeutic Hydrocortisone | Acute Myeloid Leukaemia Arising From Previous Myelodysplastic SyndromeRecurrent Acute Myeloid LeukaemiaRecurrent Myelodysplastic SyndromeRefractory Acute Myeloid LeukaemiaRefractory Myelodysplastic Syndrome | 1 | Children's Oncology Group | NCT03813147 | Suspended | No Results | 38 | Study Start:May 1, 2019Study Completion:March 31, 2021 | NO |
| Drug: MLN4924Drug: RifampinDrug: DocetaxelDrug: CarboplatinDrug: Paclitaxel | Advanced Solid Neoplasms | 1 | Millennium Pharmaceuticals, Inc. | NCT03486314 | Active | No Results | 20 | Study Start:August 13, 2018Study Completion:February 28, 2021 | NO |
| Drug: MLN4924Drug: Pemetrexed and cisplatin | Mesothelioma | 1/2 | Memorial Sloan Kettering Cancer Center | M.D. Anderson Cancer Center | NCT03319537 | Recruiting | No Results | 63 | Study Start:October 5, 2017Study Completion:October 2022 | NO |
| Drug: Azacitidine Subcutaneous Injection or Intravenous InfusionDrug: MLN4924 Infusion | Myeloproliferative Neoplasms | 2 | Vanderbilt-Ingram Cancer Center | National Cancer Institute (NCI) | NCT03238248 | Recruiting | No Results | 71 | Study Start:August 7, 2017Study Completion:July 2023 | NO |
| Drug: MLN4924Drug: FluconazoleDrug: ItraconazoleDrug: DocetaxelDrug: CarboplatinDrug: Paclitaxel | Advanced Solid Tumours | 1 | Millennium Pharmaceuticals, Inc. | Takeda | NCT02122770 | Completed | Not Reported | 51 | Study Start:April 1, 2014Study Completion:June 5, 2017 | NO |
| Drug: MLN4924Drug: Azacitidine | Acute Myeloid Leukaemia | 3 | PETHEMA Foundation | Millennium Pharmaceuticals, Inc. | Dynamic Science S.L. | NCT04090736 | Recruiting | No Results | 466 | Study Start:August 13, 2019Study Completion:June 30, 2023 | NO |
| Drug: AzacitidineDrug: MLN4924 | Recurrent Acute Myeloid LeukaemiaRefractory Acute Myeloid Leukaemia | 2 | National Cancer Institute (NCI) | NCT03745352 | Suspended | No Results | 72 | Study Start:May 20, 2019Study Completion:June 1, 2021 | NO |
| Drug: CytarabineDrug: IdarubicinDrug: MLN4924 | Acute Myeloid Leukaemia Arising From Previous Myelodysplastic SyndromeAcute Myeloid Leukaemia With Myelodysplasia-Related ChangesTherapy-Related Acute Myeloid Leukaemia | 1/2 | University of Southern California | National Cancer Institute (NCI) | NCT03330821 | Recruiting | No Results | 53 | Study Start:April 18, 2018Study Completion:April 18, 2021 | NO |
| Drug: MLN4924 | Metastatic Melanoma | 1 | Millennium Pharmaceuticals, Inc. | NCT01011530 | Completed | Partial Response; Stable Disease | 37 | Study Start:December 2009Study Completion:January 2013 | (106) |
| Drug: CarboplatinDrug: PaclitaxelDrug: MLN4924 | Metastatic Lung Non-Small-Cell Squamous CarcinomaMetastatic Lung Non-Squamous Non-Small-Cell CarcinomaStage IIIB Lung Cancer AJCC v8Stage IV Lung Cancer AJCC v8Stage IVA Lung Cancer AJCC v8Stage IVB Lung Cancer AJCC v8Unresectable Lung Non-Small Cell CarcinomaUnresectable Lung Non-Squamous Non-Small Cell Carcinoma | 2 | National Cancer Institute (NCI) | NCT03965689 | Recruiting | No Results | 25 | Study Start:September 3, 2019Study Completion:February 26, 2021 | NO |
| Drug: AzacitidineDrug: MLN4924Drug: DocetaxelDrug: PaclitaxelDrug: Carboplatin | NeoplasmsAcute Myeloid LeukaemiaChronic Myelomonocytic Leukaemia | 1 | Millennium Pharmaceuticals, Inc. | Takeda | NCT03814005 | Recruiting | No Results | 42 | Study Start:July 10, 2019Study Completion:February 22, 2022 | NO |
| Drug: MLN4924Drug: Azacitidine | Acute MyelogenousLeukemia | 1 | Millennium Pharmaceuticals, Inc.| Takeda | NCT01814826 | Completed | Complete Response; Partial Response | 64 | Study Start:April 10, 2013Study Completion:April 8, 2018 | (144) |