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<th>National Clinical Trial (NCT) Number</th>
<th>Clinical Research Trial Name</th>
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<td>NCT09742888</td>
<td>Immunocor Biotech’s CD33i T cell therapy in Multiple Myeloma</td>
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<td>Rationfpote in Combination With Anagrelide Supplementation Therapy in Patients With Myeloproliferative Neoplasms (RP-1) Post-Phase 2 Study</td>
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<td>NCT01897277</td>
<td>Gene and Virus Therapy in Treating Patients With Advanced, Metastatic Renal Cell Carcinoma</td>
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<td>NCT01808893</td>
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<td>Mass cytometry in Combination With Low-dose Dexamethasone or Placebo in Patients With Relapsed or Refractory Multiple Myeloma Following Combination Indolent Therapy in the Front Line Setting</td>
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<td>The Safety and Efficacy of T-cell therapy in Patients with Multiple Myeloma Who Have Developed 1 or More Prior Lines of Therapy (Immunocor Biotech’s CD33i CAR T cell therapy)</td>
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<td>NCT02396731</td>
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<td>NCT02516522</td>
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<td>CTL019 with HLA-A*02:01 in Patients With Hematologic, Advanced or Metastatic Non-Hodgkin Lymphoma (HLN)</td>
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<td>NCT02504155</td>
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<td>NCT01460843</td>
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<td>NCT0177239</td>
<td>Phase 2: A Sequential Treatment Trial of Single-Agent Nivolumab, Then Combination Therapy With Nivolumab in Patients With Advanced Cancer (NCT03175799)</td>
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<td>NCT03297814</td>
<td>Collection of Immunology Specimens From Patients With Cancer or Blood Disorders, and Healthy Volunteers</td>
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<td>OAK-1 in Treating Patients With Advanced Glioblastoma, Oligodendroglioma, or Astrocytoma With or Without Second-Line Therapy (NCT03211774)</td>
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<td>NCT03164652</td>
<td>Monitoring With Combination Chemotherapy in Treating Patients With Breast Cancer Or Recurrent Acute Myeloid Leukemia Or Other Acute Leukemia (NCT03164652)</td>
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<td>Abstract or Correlative Study</td>
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<td>NCT03209044</td>
<td>ABBV-5030 To Evaluate the Efficacy and Safety of ABBV-5030 in Patients With Advanced Solid Tumors (NCT03209044)</td>
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<td>Filippo De Bressac</td>
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<td>NCT03203237</td>
<td>Neoadjuvant DNA Vaccine in Combination With Nivolumab/Paclitaxel in Patients With Endocrine Node Positive Breast Cancer (NCT03203237)</td>
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<td>National Cancer Institute</td>
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<td>NCT03582027</td>
<td>A Study of the Role of NCT03582027, a Phytosterol, Arachidonic Acid-2, Inhibits a Novel Therapeutic Drug Against Cancer, and Other Malignant Conditions (NCT03582027)</td>
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<td>NCT03560222</td>
<td>A Study of the Immunological Therapeutic Agents (NCT03560222) Inhibits the Immunological Therapeutics (Phytosterol, Arachidonic Acid-2) (NCT03560222)</td>
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<td>NCT03379823</td>
<td>Phagomimetic Immunotherapy in Patients With Suspected Cell Compromising the Immune System (NCT03379823)</td>
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<td>A Study of Eporinostat Safety, Tolerability and Pharmacology in Patients With Solid Tumors</td>
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<td>Jazz Pharmaceuticals</td>
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<td>Phase 1/2</td>
<td>November 7, 2018</td>
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<tr>
<td>NCT03746198</td>
<td>Evaluation of the Safety and Efficacy of the Association of the relhb and Immunotherapy in Patients with Advanced Pancreatic Cancer</td>
<td>France</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Alois Delneri</td>
<td>Jenner Research &amp; Development</td>
<td>Recruiting</td>
<td>2018</td>
<td>2027</td>
<td>80</td>
<td>Phase 2</td>
<td>November 7, 2018</td>
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<tr>
<td>NCT03955179</td>
<td>A Study of the H3K72Me3 Inhibitors in Participants With Metastatic Melanoma, Squamous Cell Carcinoma, or Breast Carcinoma</td>
<td>Italy</td>
<td>Janssen Research &amp; Development</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Secondary outcome measure</td>
<td>N/A</td>
<td>Jasmine Research &amp; Development</td>
<td>Recruiting</td>
<td>2019</td>
<td>2022</td>
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<td>February 20, 2019</td>
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<tr>
<td>NCT03895878</td>
<td>TSR-042 in Addition to Standard of Care Definitive Radiation for Esophageal Cancer (TROPHY-1)</td>
<td>US</td>
<td>National Cancer Institute</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Exploratory objective</td>
<td>N/A</td>
<td>Stephen Markova</td>
<td>chemosens</td>
<td>Recruiting</td>
<td>2019</td>
<td>2022</td>
<td>12</td>
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<td>May 20, 2019</td>
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<tr>
<td>NCT03997608</td>
<td>A Breast Cancer Genomic Guided Therapy Study</td>
<td>US</td>
<td>Cogney Clinic</td>
<td>Oncology</td>
<td>Mass cytometry and Imaging Mass Cytometry</td>
<td>Exploratory objective</td>
<td>N/A</td>
<td>Matthew P. Goetz</td>
<td>National Cancer Institute</td>
<td>Recruiting</td>
<td>2020</td>
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<td>June 7, 2019</td>
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<tr>
<td>NCT04009867</td>
<td>Biomarkers for Antitumor Activity (Antitumor Activity) in Patients With Advanced Renal Cell Carcinoma</td>
<td>Canada</td>
<td>Parkland Hospital</td>
<td>Immuno-oncology</td>
<td>Imaging Mass Cytometry</td>
<td>Primary outcome measure</td>
<td>N/A</td>
<td>Yves Fiset</td>
<td>Merck Sharp &amp; Dohme</td>
<td>Recruiting</td>
<td>2020</td>
<td>2022</td>
<td>12</td>
<td>N/A (observational)</td>
<td>August 19, 2019</td>
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<tr>
<td>NCT04066537</td>
<td>Identification of Novel Biomarkers of Response to Systemic Treatment in Non-Small Cell Lung Cancer (NCT04066542)</td>
<td>US</td>
<td>University of Pennsylvania</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Primary outcome measure</td>
<td>N/A</td>
<td>Sarah Wells</td>
<td>CTEM</td>
<td>Recruiting</td>
<td>2020</td>
<td>2022</td>
<td>12</td>
<td>N/A (observational)</td>
<td>August 19, 2019</td>
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<tr>
<td>NCT04680614</td>
<td>Testing the Combination of Nerve Growth Factor Neutralizing Monoclonal Antibodies and Radiation Therapy for Advanced Metastatic Soft Tissue and Bone Sarcomas</td>
<td>US</td>
<td>National Cancer Institute, Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Kristen Spencer</td>
<td>Anantheg Cancer Institute of New Jersey</td>
<td>Recruiting</td>
<td>2019</td>
<td>2022</td>
<td>62</td>
<td>Phase 1/2</td>
<td>August 28, 2019</td>
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<tr>
<td>NCT04701867</td>
<td>Identification of Genes Involved in Cytotoxic Treatment in Refractory Hodgkin Lymphoma (NCT04701852)</td>
<td>US</td>
<td>University of Southern California</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Sarah Karon</td>
<td>National Cancer Institute</td>
<td>Recruiting</td>
<td>2020</td>
<td>2021</td>
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<td>Phase 1</td>
<td>September 17, 2019</td>
</tr>
<tr>
<td>NCT04731635</td>
<td>Study of JNJ-68284528, a CAR-T Therapy Directed Against B-Cell Lymphoma</td>
<td>US</td>
<td>Nationwide Children's Hospital</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Timothy Vincents</td>
<td>American Society of Clinical Oncology</td>
<td>Recruiting</td>
<td>2019</td>
<td>2021</td>
<td>80</td>
<td>Early Phase 1</td>
<td>August 28, 2019</td>
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<tr>
<td>NCT04156079</td>
<td>Immune Profiling in Head and Neck Squamous Cell Carcinoma</td>
<td>Italy</td>
<td>University of Turin</td>
<td>Oncology</td>
<td>Secondary outcome measure</td>
<td>N/A</td>
<td>Mario Boccardo</td>
<td>chemosens</td>
<td>Recruiting</td>
<td>2019</td>
<td>2020</td>
<td>90</td>
<td>N/A (observational)</td>
<td>October 22, 2019</td>
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<tr>
<td>NCT04108327</td>
<td>2A CAR T Cell Therapy (NCT04108354) - A Multicenter, Single Arm, Non-Randomized, Phase 1 Study of JNJ-62253464, a CD19 Targeted CAR T Cell Therapy for the Treatment of Refractory B-Cell Lymphoma</td>
<td>US</td>
<td>Nationwide Children's Hospital</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Secondary outcome measure</td>
<td>N/A</td>
<td>Jennifer Research &amp; Development</td>
<td>chemosens</td>
<td>Recruiting</td>
<td>2020</td>
<td>2024</td>
<td>90</td>
<td>Phase 2</td>
<td>December 2, 2019</td>
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<tr>
<td>NCT04131575</td>
<td>Cell Cycles Modulation With Immunocompetent, Tumor-Targeted, and Neutrophil Engineering</td>
<td>US</td>
<td>Nationwide Children's Hospital</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Mark Rasch</td>
<td>Ohio State University</td>
<td>Not yet recruiting</td>
<td>2021</td>
<td>2024</td>
<td>25</td>
<td>Phase 1/2</td>
<td>December 26, 2019</td>
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<tr>
<td>NCT04236374</td>
<td>B-cell Malignancies with Unmet Need: Low Tumor Burden, Multiple Myeloma</td>
<td>US</td>
<td>Nationwide Children's Hospital</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Secondary outcome measure</td>
<td>N/A</td>
<td>Peter Martin</td>
<td>Chemosens</td>
<td>Recruiting</td>
<td>2020</td>
<td>2022</td>
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<td>January 19, 2020</td>
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<tr>
<td>NCT04254439</td>
<td>馨開肺統3期試験：法限定高MOA細胞体療法予備治療試験</td>
<td>US</td>
<td>Nationwide Children's Hospital</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Michelle L. Abdalla</td>
<td>Chemosens</td>
<td>Recruiting</td>
<td>2021</td>
<td>2025</td>
<td>24</td>
<td>Phase 3</td>
<td>February 5, 2020</td>
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<tr>
<td>NCT04270349</td>
<td>Cancer Peptide Plus I Vinz CI K and Adjutant in Breast Cancer</td>
<td>US</td>
<td>Duke University</td>
<td>Oncology</td>
<td>Secondary outcome measure</td>
<td>N/A</td>
<td>Herbert Jaffe</td>
<td>chemosens</td>
<td>Recruiting</td>
<td>2020</td>
<td>2024</td>
<td>18</td>
<td>Phase 1</td>
<td>February 17, 2020</td>
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<tr>
<td>NCT04380258</td>
<td>Discovery of Biomarkers for Interface Radiation Sensitivity in Cancer Patients</td>
<td>Singapore</td>
<td>National Cancer Centre</td>
<td>Oncology</td>
<td>Mass cytometry</td>
<td>Primary outcome measure</td>
<td>N/A</td>
<td>Mervin Chua</td>
<td>Duke-NUS Graduate Medical School, Ferring Pharmaceuticals, Immunocore, Designare Biopharmaceuticals</td>
<td>Recruiting</td>
<td>2015</td>
<td>2026</td>
<td>1200</td>
<td>N/A (observational)</td>
<td>April 9, 2020</td>
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<tr>
<td>NCT04380645</td>
<td>Neutrophils, Phagocytosis, and Interferon Alpha 2b in the Treatment of Esophageal Carcinoma (NEPTUNE)</td>
<td>US</td>
<td>MD Anderson Cancer Center</td>
<td>Immuno-oncology</td>
<td>Mass cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Ahmed O. Kasrie</td>
<td>National Cancer Institute</td>
<td>Recruiting</td>
<td>2020</td>
<td>2021</td>
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<td>Phase 1/2</td>
<td>May 8, 2020</td>
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<tr>
<td>NCT04398245</td>
<td>Bacterial Antibodies Against Tumor Endothelial Cancer</td>
<td>Mexico</td>
<td>Immunologic Technology Group</td>
<td>Oncology</td>
<td>Imaging Mass Cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Marilyn Huang</td>
<td>Chemosens</td>
<td>Recruiting</td>
<td>2020</td>
<td>2023</td>
<td>90</td>
<td>Phase 2</td>
<td>May 19, 2020</td>
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<tr>
<td>NCT04513738</td>
<td>A Study of the Effect of Neutrophil Lysosomal Hydrolases on Tumor Inflammation (NCT04513762)</td>
<td>US</td>
<td>University of Louisville</td>
<td>Immuno-oncology</td>
<td>Secondary outcome measure</td>
<td>N/A</td>
<td>Kelly McDevitt</td>
<td>Chemosens</td>
<td>Recruiting</td>
<td>2020</td>
<td>2021</td>
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<td>N/A</td>
<td>August 14, 2020</td>
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<tr>
<td>NCT04662930</td>
<td>Evaluation of Tumor Protein Profiles of Histological Malignancies in Patients With Localized Advanced or Metastatic Cancers (EPITOPES)</td>
<td>France</td>
<td>Centre Hospitalier Universitaire de Strasbourg</td>
<td>Oncology</td>
<td>Mass cytometry</td>
<td>Secondary outcome measure</td>
<td>N/A</td>
<td>Nadine Houdou</td>
<td>Center for Blood, Stem Cell and Organ Transplantation, NHS Foundation Trust, Medical Center and Medical School, Ferring Pharmaceuticals</td>
<td>Not yet recruiting</td>
<td>2020</td>
<td>2022</td>
<td>60</td>
<td>N/A (observational)</td>
<td>September 24, 2020</td>
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<tr>
<td>NCT04663447</td>
<td>A Phase 5 Study of Cisplatin, Gemcitabine, Nab-Paclitaxel, and Gemtuzumab Ozogamicin in Metastatic PS PT Patients (PAC650-033)</td>
<td>US</td>
<td>Nationwide Children's Hospital</td>
<td>Immuno-oncology</td>
<td>Imaging Mass Cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Paul Vesper</td>
<td>Nationwide Pharmaceuticals</td>
<td>Recruiting</td>
<td>2020</td>
<td>2022</td>
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<td>Phase 1</td>
<td>October 9, 2020</td>
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<td>National Clinical Trial (NCT) Number</td>
<td>Clinical Research Trial Name</td>
<td>Country</td>
<td>Sponsor</td>
<td>Application</td>
<td>Platform</td>
<td>CyTOF: Study Objective or Correlative Study</td>
<td>Associated Abstract or Publication</td>
<td>Investigator</td>
<td>Collaborator</td>
<td>Recruitment Status</td>
<td>Start Date</td>
<td>Completion Date</td>
<td>Enrollment</td>
<td>Phase</td>
<td>Study Posted Date</td>
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<td>NCT04638582</td>
<td>Pembrolizumab as Neoadjuvant Therapy for Resectable Stage III to IV Non-Small Cell Lung Cancer (PD-1L1)</td>
<td>Canada</td>
<td>McGill University Health Centre/Research Institute of the McGill University Health Centre</td>
<td>immuno-oncology</td>
<td>Imaging Mass Cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Jonathan Spicer</td>
<td>none</td>
<td>Not yet recruiting</td>
<td>2021</td>
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<td>Phase 2</td>
<td>November 20, 2020</td>
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<tr>
<td>NCT04638751</td>
<td>ARGONAUT: Stool and Blood Sample Bank for Cancer Patients</td>
<td>US</td>
<td>Persephone Biosciences</td>
<td>Oncology</td>
<td>Mass cytometry</td>
<td>Secondary outcome measure</td>
<td>N/A</td>
<td>Stephanie Culler</td>
<td>none</td>
<td>Recruiting</td>
<td>2020</td>
<td>2024</td>
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<td>N/A (observational)</td>
<td>November 20, 2020</td>
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<td>NCT04652960</td>
<td>Duvelisib and Nivolumab for the Treatment of Stage IIB-IVB Mycosis Fungoides and Sezary Syndrome</td>
<td>US</td>
<td>National Cancer Institute</td>
<td>immuno-oncology</td>
<td>Mass cytometry</td>
<td>Other outcome measure</td>
<td>N/A</td>
<td>Neha Mehta-Shah</td>
<td>Yale University Cancer Center</td>
<td>Not yet recruiting</td>
<td>2021</td>
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<td>Phase 1</td>
<td>December 4, 2020</td>
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<tr>
<td>NCT04703244</td>
<td>Development of Patient Derived Xenografts (PDX) in Patients With Breast Cancer</td>
<td>US</td>
<td>Mayo Clinic</td>
<td>Oncology</td>
<td>Mass cytometry</td>
<td>Secondary outcome measure</td>
<td>N/A</td>
<td>Judy C. Boughey and Matthew P. Goetz</td>
<td>none</td>
<td>Recruiting</td>
<td>2021</td>
<td>2042</td>
<td>100</td>
<td>N/A (observational)</td>
<td>January 11, 2021</td>
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