Department of Investigational Cancer Therapeutics

Phase I Clinical Trials

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THE UNIVERSITY OF TEXAS MD Anderson Cancer Center

Making Cancer History®

FROM THE CHAIR

Chair, Department of Investigational Cancer Therapeutics

This is such an exciting time in medicine. We have a deeper understanding of cancer biology, better tools to dissect each patient's individual tumor and rapidly emerging novel therapies. Never have we been so poised to impact oncologic outcomes with early therapeutics.

Reflecting this opportunity, The University of Texas MD Anderson Cancer Center Department of Investigational Cancer Therapeutics (ICT) has more than doubled its size in the past four years. We now have 216 employees, all with the shared vision of bringing our patients state-of-the-art research-driven yet patient-centric patient care, through novel molecular therapeutics and biomarker-driven clinical trials.

Immunotherapy remains at the forefront of research, with multiple new approvals and many novel combination therapies. The pan-cancer approval of pembro for microsatellite instable tumors irrespective of histology is really exciting, and of course has important implications for precision medicine overall. There is a lot of interesting translational science, which I hope soon we will be able to convert into strategies to select the best treatment for each patient.

Precision medicine has started to deliver on its promise. It has been very exciting to see positive signals in many different histologies for important drivers such as HER2 amplifications and BRAF V600E mutations. FDA approval of vemurafenib for BRAF V600E-mutant Erdheim-Chester disease based on a basket trial recently published emphasizes the power of multihistology basket trials beyond signal seeking (Diamond, Subbiah, et al., *JAMA Oncology* 2018; doi: 10.1001/jamaoncol.2017.5029). Similarly, the efficacy signal of dabrafenib/trametinib in BRAF V600E-mutant anaplastic thyroid cancer was striking, increasing hope for patients with this otherwise deadly disease. Importantly, I would like to highlight that an investigator-initiated trial led by David Hong from ICT in collaboration with Scott Kopetz in Gastrointestinal Medical Oncology led to the positive SWOG trial with cetuximab + irinotecan +/- vemurafenib for patients with BRAF V600E mutations, and subsequently to incorporation of this into NCCN guidelines.

Needless to say, the results of larotrectinib trial for TRK fusions across histologies was just remarkable, emphasizing the importance of looking for these alterations in the rare diseases where they are common and raising the question of how we can effectively look for them earlier, in patients with common histologies where these fusions are found, but rarely (Drilon *N Engl J Med* 2018; doi: 10.1056/NEJMoa1714448).

A lot is new in HER2/neu! As we do more genomic testing we see amplifications and mutations in many tumor types. There are many new therapeutics in this space; expect a lot of new developments. Please see the article on page 11 for a wrapup of Sarina Piha-Paul's ongoing early therapeutics work in this space.

Yet, it is now clear that genomics alone is not meeting all our needs for personalization. Thus, we are excited to explore new tools to refine decision making. In addition, there is increasing momentum in antibody-drug conjugates: new payloads, new targets, newer antibody technologies such as biospecifics. I have no doubt that we will be able to dramatically expand our ability to personalize therapy with these tools. Further, these agents bring forward exciting new opportunities for combination therapy as well as targeted therapy.

As our novel therapeutic options expand, it is becoming increasingly complex to determine how we can best optimize combination therapies. To address these questions, we have substantially expanded our preclinical capabilities including syngeneic models for immune-oncology, and more high-throughput growth assays *in vitro* and *in vivo* for targeted therapy. In addition, we are developing patient-derived 2D and 3D models for testing sensitivity, pharmacodynamics effects, adaptive responses and rational combinations. We are also developing a large panel of patient-derived xenografts (PDXs) representing standard therapy-resistant disease, as well as acquired resistance models to novel therapeutics, across common as well as rare histologies. This year, Jack Roth from Thoracic Surgery and I were awarded a PDX NeT consortium grant, which will give us the opportunity to perform more preclinical modeling so we can launch more investigator-initiated Phase Ib trials with rational combinations as well as biomarker-driven Phase II trials with our collaborators through the Early Therapeutics Clinical Trials Network and beyond.

I am told that MD Anderson is big and seems difficult to navigate. The last page of this newsletter has detailed information for patient referrals. If you are a clinician thinking of referring a patient, or a pharma or biotech partner looking to set up a collaboration, I would be delighted to hear from you to discuss your patient, or a new molecular entity or technology. I am responsive to email (fmeric@mdanderson.org) and also happy to chat by phone (personal cell 832-482-8248). I look forward to hearing from you. ■

Fighting Cancer is a Team Sport

By Stevan Koch, Survivor

Sports – I love sports. Having just concluded two weeks of late-night TV viewing of the winter Olympics halfway around the world, I am struck by how important teamwork is in order to overcome the incredible challenges that these world-class athletes face. Yet as anyone dealing with cancer will tell you, there is no challenge greater than fighting this insidious disease, and as in sports, one needs an outstanding team to have any chance to win.

It is the responsibility of each individual to select the strongest team possible for their particular circumstances. In my case, my team consists of:

1. My God first and foremost, who gives us the intelligence to utilize science to better the human condition, and who provides me the peace of mind to appreciate my situation and the tremendous support that I receive daily from the rest of my team.
2. Family and friends, with the incredible support of my loving wife, Shirley, who is indispensable.
3. Doctors and caregivers: Both as individuals and as a corporate team who share ideas and the benefit of their experience to ensure that cutting-edge developments don't slip through the cracks as they identify alternatives and select the optimal treatment plan. There is a huge benefit to climbing the learning curve in any discipline, and in my opinion, MD Anderson is well ahead of anyone else in both quantity and variety of cancers seen and successfully treated.
4. Leading research scientists, like Dr. James Allison, chair of Immunology, who not only feed the clinical care professionals with ideas, but by virtue of their association keep an organization sharp and on point, while attracting leading-edge ideas to move the team forward.
5. Health insurance providers and government policymakers: I am thankful that we live in a compassionate country that places a high value on human life, and that MD Anderson accepts the insurance options offered to make this world-class treatment available.

Stevan and his wife, Shirley, visited Ireland in 2017.

I was first diagnosed with colorectal cancer in 2011. Following surgery and ineffective prophylactic chemotherapy in Michigan, it was subsequently confirmed to be stage IV metastatic disease in 2013. After an additional ineffectual surgery at the University of Michigan, I pursued a second opinion at MD Anderson in February 2014. When two additional chemotherapy regimens failed to stem the advance of my disease, I was given a 3% chance of surviving until last year, and that was before discovering in 2016 that I have also developed an aggressive form of prostate cancer (Gleason Scores of 8 and 9).

Lacking any alternatives, I was directed to Dr. Vivek Subbiah, assistant professor of Investigational Cancer Therapeutics, who accepted me into his care. Through his innovative, creative insight into the dynamics of my particular disease, he has managed to control the advance of my cancer while providing me with an excellent quality of life. He invests the time to remain on the cutting edge of this rapidly changing field, continuously seeking options that might provide me with longer-term treatment options. Dr. Subbiah allows me the time to exchange ideas, is open, insightful, not arrogant, explains complex concepts well, and maximizes the use of MD Anderson resources – including his peers – to generate options and vet alternatives to produce the optimal course of treatment, appropriately pushing boundaries while maximizing patient safety.

My two cancer types are both microsatellite instability high (MSI-H), meaning that I have a mismatch repair deficiency that results in my tumors presenting thousands of mutations that potentially make them susceptible to multiple treatment options, particularly immunotherapy. I find myself at a very interesting time in history presuming that I can remain alive long enough to benefit from the incredible pace of change in this exciting discipline.

Winning teams have well-trained, world-class athletes who understand the game plan and pull together under the guidance of a strong leader – all of which are there for me under the excellent leadership of Dr. Subbiah at MD Anderson's Targeted Therapy Clinic.

I have remained in contact with other renowned experts pertaining to my condition at such leading hospitals as Johns Hopkins and Memorial Sloan Kettering, and Dr. Subbiah remains my first choice to holistically combat this insidious disease. While he has not created unreasonable expectations, he has tremendous creativity, initiative and intellect, leaving no stone unturned in the pursuit of a patient's interests, and inspiring confidence in the realization that he will remain fighting at your side until the last possible option is exhausted. While doing so, he very considerately seeks to accommodate my work and family obligations, balancing treatment and life demands to maximize my quality of life.

Viewed objectively, cancer can be a blessing – it generally leaves the time to consider what is important, and if one can maintain a decent quality of life, one can use the remaining time available, as Tim McGraw so eloquently sings, to "Live Like You Were Dying." No one will live forever, with many people unfortunately expiring suddenly from other causes without the opportunity to make their final years count. Imagine how much better to receive this wakeup call, and then to still benefit from the added quality time that your care team can provide. We may be pushed back deep in our own territory, but we've got the ball, momentum has shifted, and the "A" team is on the field. This game's not over yet!

Dr. Subbiah and the targeted therapy team have kept me alive beyond anyone's reasonable expectations – other than my own unreasonable demands, all the while digging to produce options that have the chance to actually extend my life long enough for my cancer to potentially become a treatable chronic disease. I can't thank MD Anderson and Dr. Subbiah enough for the care that is being provided to me at his hands, and those of the targeted therapy TEAM. ■

Targeting Cancer DNA Repair in the Clinic

By Timothy Yap, MBBS, PhD

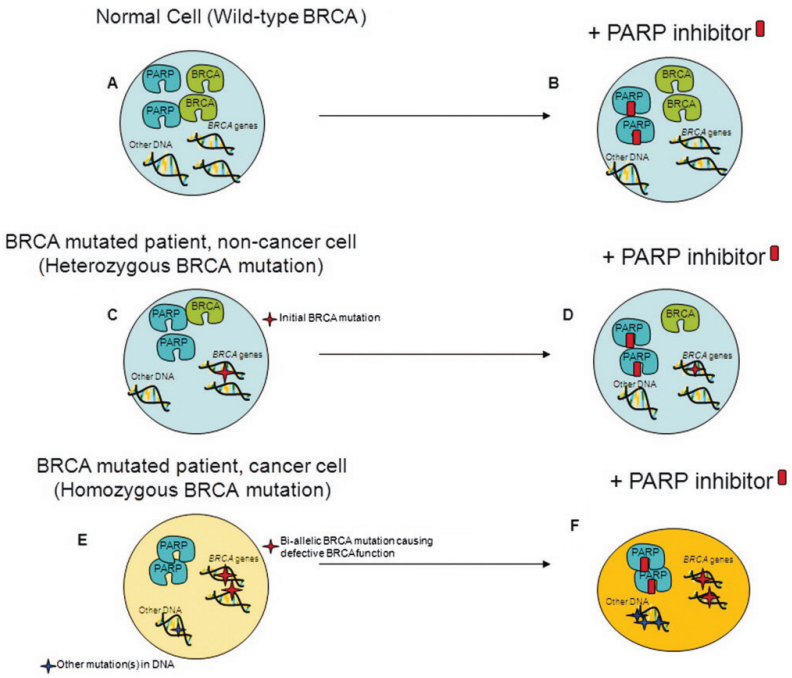
DNA damage is constantly occurring in cells due to exogenous and endogenous stressors, and cells have consequently evolved a complex, coordinated DNA damage response (DDR) through numerous interdependent signaling pathways.

Cells are programmed to constitutively respond to DNA damage, whereby the repair pathways utilized are dependent on the specific type of damage detected and repair machinery available. The most common types of DNA damage are altered bases and DNA single strand (ssDNA) breaks, which typically occur due to DNA processing. Altered bases and ssDNA breaks are repaired primarily through the base excision repair (BER) pathway. The nucleotide excision repair (NER) pathway complements BER and replaces DNA damaged by bulky adducts, as in the case of ultraviolet light damage and platinum chemotherapies, which may alter the conformation of the DNA helix. While ssDNA breaks are most common in the cell, DNA double strand (dsDNA) breaks are the most lethal and require rapid attention for cell survival. Thus, most modern DDR-directed therapies in the clinic target the DDR signaling and repair mechanisms associated with dsDNA break repair, replication stress, and cell cycle control.

Each of these DNA repair mechanisms is utilized by the cell to deal with specific types of DNA damage and to mitigate replication stress. It is now clear that tumors with homologous recombination deficiency (HRD) have an increased reliance on alternative error-prone DNA repair mechanisms. As such, a comprehensive understanding of the dynamic DDR alterations in a cancer can guide antitumor synthetic lethal treatment strategies. Historically, anticancer therapies have taken advantage of these vulnerabilities through DNA-damaging chemotherapies and radiation, which lead to overwhelming genomic instability and cell death at the cost of toxicity. However, over the past decade, there has been a rapid development of an armamentarium of potent and relatively selective antitumor agents against key DDR pathway targets or DDR inhibitors. Despite this, the development of analytically validated and clinically qualified assays to robustly assess predictive biomarkers of response and/or resistance has lagged behind. In spite of the wide spectrum of biomarker assays under investigation, ranging from single-gene variants to genome-wide and proteomic expression-level changes, the only companion biomarkers currently approved by the Food and Drug Administration (FDA) for DDR inhibitors are for the detection of germline BRCA1 and BRCA2 (BRCA1/2) mutations, which may be utilized for the selection of patients for poly(ADP-ribose) polymerase (PARP) inhibitor therapy.

Here in the Department of Investigational Cancer Therapeutics (ICT) Phase I Program, we are developing novel therapies against key components of the DDR pathway. For example, the discovery that BRCA1/2-mutant cancer cells are exquisitely sensitive to PARP inhibition has ushered in a new era of research into biomarker-driven synthetic lethal treatment strategies for different cancers (see figure). This is a critical area of interest for ICT, where efforts are now focused on optimizing these therapies through the development of predictive biomarker assays of response beyond BRCA1/2 mutations, the assessment of underlying mechanisms of resistance, and the evaluation of biologically rational, safe combinatorial regimens with novel molecularly targeted agents and immune checkpoint inhibitors across a range of cancers. Current related trials in ICT include:

- Talazoparib (PARP inhibitor) in patients with molecularly selected cancers
- Talazoparib in patients in hepatic or renal dysfunction
- Talazoparib + Avelumab (PD-L1 inhibitor) in patients with molecularly selected cancers
- Olaparib (PARP inhibitor) in patients with molecularly selected cancers
- Cedirinib (VEGFR inhibitor) + olaparib in patients with advanced solid cancers
- Niraparib (PARP inhibitor) + TSR-042 (PD-1 inhibitor) in patients with advanced solid cancers
- Niraparib + TSR-042 + bevacizumab (VEGF inhibitor) in patients with advanced solid cancers



Yap et al., 2011. CA: A Cancer Journal for Clinicians. *doi: 10.3322/caac.20095. Reprinted with permission.*

In addition, the therapeutic landscape of antitumor agents targeting DDR has rapidly evolved to include potent inhibitors against other key components of DNA repair and replication, including ataxia telangiectasia and rad3-related (ATR), ataxia telangiectasia mutated (ATM), WEE1, checkpoint kinase 1 and 2 (CHK1/2) and DNA-dependent protein kinase (DNA-PK). We are conducting clinical trials of promising inhibitors against each of these key DDR targets as single agents or in rational combinations in patients with selected molecularly driven cancers. Examples of these clinical trials in ICT include:

- BAY1895344 (ATR inhibitor)
- AZD1775 (WEE1 inhibitor) + olaparib (PARP inhibitor)
- VX-970 (ATR inhibitor) + veliparib (PARP inhibitor) + cisplatin

For more information on any of these trials, please call (713) 563-1930. ■

Active Phase I Program Protocols May 2018

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Protocol	Title	Drug & Mechanism of Action	PI
2017-1041	A Phase I Study of BMS-986299 as Monotherapy and in Combination with Nivolumab and Ipilimumab in Participants with Advanced Solid Cancers	BMS-986299 (Nucleotide-binding domain and leucine-rich repeat-containing protein 3 [NLRP3] agonist) +/- immunotherapy -	Janku
2017-0994	A Phase I/II, Open-label, Multicenter Study to Investigate the Safety, Pharmacokinetics, and Efficacy of TAS0728, an Oral Covalent Binding Inhibitor of HER2, in Subjects with Advanced Solid Tumors with HER2 or HER3 Abnormalities	TAS0278 (HER2 inhibitor) Phase I	Piha-Paul
2017-0928	A Phase I Study of CPI-1205 with Ipilimumab in Patients with Advanced Solid Tumors Followed by a Phase II Basket Study of CPI-1205 with Ipilimumab in Selected Tumor Types Previously Treated with PD-1 or PD-L1 Inhibitors	CPI-1205 (EZH2 inhibitor)+ Ipilimumab (CTLA4 inihibitor) Phase II	Yap
2017-0918	Phase I/IIa Dose escalation and expansion study evaluating safety, tolerability, pharmacokinetic, pharmacodynamics and anti-tumor activity of PF-06873600 as a single agent and in combination with endocrine therapy	PF-06873600 (CDK inhibitor) + Fulvestrant (Estrogen Receptor antagonist)	Yap
2017-0918	Phase I/IIa Dose escalation and expansion study evaluating safety, tolerability, pharmacokinetic, pharmacodynamics and anti-tumor activity of PF-06873600 as a single agent and in combination with endocrine therapy	PF-06873600 (CDK inhibitor) + Letrozole (aromatase inhibitor)	Yap
2017-0870	A Phase I Multiple Dose Study to Evaluate the Safety and Tolerability of XmAb 18087 in Subjects with Advanced Neuroendocrine and Gastrointestinal Stromal Tumors	XmAb18087 (bi-specific antibody targeting SSTR2)	Pant
2017-0863	Modular Phase II Study to Link Combination Immune-Therapy to Patients with Advanced Solid and Hematologic Malignancies Module 9: PDR001 plus LAG525 for Patients with Advanced Solid and Hematologic Malignancies	PDR001 (anti-PD-1 mAB) + LAG525 (anti-LAG-3 antibody)	Piha-Paul
2017-0853	A Phase I Open-label, Multicenter Study of MK-2118 Administered by Intratumoral Injection as Monotherapy and in Combination with Pembrolizumab for Patients with Advanced/Metastatic Solid Tumors or Lymphomas	MK-2118 (STING agonist) +/- Pembrolizumab (anti-PD-1 mAB)	Yap
2017-0821	A Phase I/Ib, Open-Label, Multi-Center Dose-Escalation and Dose-Expansion Study of the Safety and Tolerability of Intratumorally Administered LHC165 Single Agent and in Combination with PDR001 in Patients with Advanced Malignancies	LHC165 (TLR-7 agonist)	Meric-Bernstam
2017-0790	An Open-Label, Non-Randomized, Multicenter Study to Determine the Pharmacokinetics and Safety of Niraparib Following A Single Oral Dose in Patients with Advanced Solid Tumors and Either Normal Hepatic Function or Moderate Hepatic Impairment	Niraparib (PARP inhibitor)	Piha-Paul
2017-0787	An Open Label Study of SC-005 in Subjects with Triple Negative Breast Cancer (TNBC)	SC-005 (MFI2 inhibitor)	Meric-Bernstam
2017-0779	A Phase I, Open-Label, Multicenter Trial Investigating the Safety, Tolerability, and Preliminary Antineoplastic Activity of Sym021 (Anti-PD-1) in Patients with Advanced Solid Tumor Malignancies or Lymphomas	Sym021 (anti-PD-1 mAB)	Rodon Ahnert
2017-0703	A Phase I/II Study to Evaluate the Safety, Tolerability, and Efficacy of INCB001158 in Combination With Chemotherapy, in Subjects With Advanced or Metastatic Solid Tumors	INCB001158 (Argenase 1/2 inhibitor) + Gemcitabine and Cisplatin (Chemotherapy) - Arm B	Naing
2017-0690	Phase Ib dose-finding study of niraparib or carboplatin-paclitaxel in combination with TSR-042 in patients with advanced or metastatic cancer	Carboplatin-Paclitaxel (chemotherapy) + + Bevacizumab (VEGF inhibiitor)+ TSR-42 (anti-PD-1 mAB) - Part D	Yap
2017-0682	An Open-Label, Randomized-Sequence, Multicenter, Single-Crossover Study to Assess the Relative Bioavailability of Niraparib Tablet Formulation Compared to Niraparib Capsule Formulation in Patients with Advanced Solid Tumors	Niraparib (PARP inhibitor)	Piha-Paul
2017-0670	An Open Label, Phase I Study of SC-004 in Subjects with Advanced Solid Cancers	SC-004 (CLDN6/CLDN9 mAB)	Subbiah
2017-0624	A Phase I Trial of MK-4280 as Monotherapy and in Combination with Pembrolizumab in Subjects with Advanced Solid Tumors	MK-4280 (LAG-3 inhibitor) + Pembrolizumab (anti-PD-1 mAB) - Part B	Piha-Paul
2017-0614	A Two-Part, Phase I, Open-Label, Multicenter, Non-Randomized, Dose Escalation/Expansion Study to Evaluate the Safety and Tolerability of HTI-1066 in Subjects with Advanced Solid Tumors	HTI-1066 (cMET inhibitory mAB)	Fu
2017-0600	The Toca 6 Study: A Phase Ib Study of Toca 511, a Retroviral Replicating Vector, Combined with Toca FC in Patients with Solid Tumors or Lymphoma	Toca 511 (retroviral replicating vector) + Toca FC (antifungal)	Rodon Ahnert
2017-0567	The Targeted Agent and Profiling Utilization Registry (TAPUR) Study	Axitinib (VEGFR inhibitor) - For RCC	Meric-Bernstam

Referring physicians and nurses who want to present patients for possible Phase I clinical trial inclusion are invited to attend the weekly treatment planning conference held every Wednesday from 8 to 8:30 a.m. Contact Ly M. Nguyen, senior study coordinator, to add a case to the meeting agenda. (lmnguyen1@mdanderson.org; 713-563-2169). See also: clinicaltrials.org.

Protocol	Title	Drug & Mechanism of Action	PI
2017-0549	Phase I, First-in-Human, Open-Label, Multiple-Ascending Dose Study to Investigate the Safety, Tolerability, Pharmacokinetics, Pharmacodynamics and Clinical Activity of M4112 an IDO1/TDO2 Inhibitor as Single Agent and Sequentially in Combinations with Avelumab or M7824 (TGF? Trap) in Subjects with Metastatic or Locally Advanced Unresectable Solid Tumors	M4112 (ID01/TDO2 inhibitor) - Part 1A	Naing
2017-0539	A Phase I Dose Escalation Study Evaluating the Safety and Tolerability of PF-06804103 in patients with Human Epidermal Growth Factor Receptor 2 (HER2) Positive Solid Tumors	PF-06804103 (HER2 ADC) - Phase I	Meric-Bernstam
2017-0526	A Phase II, Multi-Center, Open Label Study of NIR178 in Combination with PDR001 in Patients with Selected Advanced Solid Tumors and Non-Hodgkin Lymphoma	NIR178 (adenosine A2a receptor antagonist) + PDR001 (anti-PD-1 IgG4 antibody)	Yap
2017-0524	A Phase Ib/II Study to Evaluate Safety and Anti-Tumor Activity of Avelumab in Combination with the Poly (Adenosine Diphosphate [ADP]-Ribose) Polymerase (PARP) Inhibitor Talazoparib in Patients with Locally Advanced or Metastatic Solid Tumors	Avelumab (anti-PD-L1 monoclonal antibody) + Talazoparib (PARP inhibitor)	Yap
2017-0520	A Phase Ib Study of Intratumoral IMO-2125 in Patients with Refractory Solid Tumors (Illuminate-101)	IMO-2125 (TLR9 [toll-like receptor] agonist)	Subbiah
2017-0418	A Phase I/II Study of the TRK Inhibitor LOXO-195 in Adult Subjects with NTRK Fusion (Previously Treated) or Non-Fusion NTRK Altered Cancers	LOXO-195 (TRK inhibitor)	Hong
2017-0406	A Phase Ia/Ib Dose Escalation and Expansion Study of Single-Agent SC-003 in Subjects with Platinum-Resistant/Refractory Ovarian Cancer	SC-003 (DPEP-3 ADC)	Subbiah
2017-0391	A Phase I Dose Escalation and Cohort Expansion Study of TSR-022, an anti-TIM-3 Monoclonal Antibody, in Patients with Advanced Solid Tumors	TSR-022 (anti-TIM-3 mAB) - Part 2 Expansion monotherapy	Yap
2017-0376	A Phase I/II, Open-Label, Multiple Ascending Dose Trial to Investigate the Safety, Tolerability, Pharmacokinetics, Biological, and Clinical Activity of AGEN2034 in Subjects with Metastatic or Locally Advanced Solid Tumors, with Expansion to Select Solid Tumors	AGEN2034 (anti-PD-1 mAB) - Phase I	Subbiah
2017-0308	A Phase Ib, open label, multicenter study of the safety and efficacy of MIW815 (ADU-S100) administered by intratumoral injection with PDR001 to patients with advanced/metastatic solid tumors or lymphomas	MIW815 (STING agonist) + PDR001 (anti-PD-1IgG4 antibody)	Meric-Bernstam
2017-0307	A Phase I/II, Open-Label, Dose-Finding, Proof of Concept, First-in-Human Study to Evaluate the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of CX-2009 in Adults with Metastatic or Locally Advanced Unresectable Solid Tumors	CX-2009 (CD166 probody)	Meric-Bernstam
2017-0304	Phase Ib Multi-Indication Study of Anetumab Ravtansine (BAY 94-9343) in Patients with Mesothelin Expressing Advanced or Recurrent Malignancies	Anetumab Ravtansine (anti-mesothelin) - monotherapy	Subbiah
2017-0297	A Phase I, Open-Label, Dose Escalation Study of PRS-343 in Patients with HER2-Positive Advanced or Metastatic Solid Tumors	PRS-343 (bispecific HER2+/CD137 antibody)	Piha-Paul
2017-0237	A Phase I/II Study Exploring the Safety, Tolerability, and Efficacy of INCAGN01876 in Combination With Immune Therapies in Subjects With Advanced or Metastatic Malignancies	INCAGN1876 (GITR agonist) + Ipilimumab (anti-CTLA-4 antibody) - Group C Concurrent	Subbiah
2017-0214	A Phase I, Multicenter, Open-label Study to Evaluate the Safety, Tolerability, and Pharmacokinetics of TAB001 in Subjects with Advanced Malignancies	TAB001 (PD-1 inhibitor)	Naing
2017-0202	A Phase I Study of Oral LOXO-292 in Patients with Advanced Solid Tumors, Including RET-Fusion Non-Small Cell Lung Cancer, Medullary Thyroid Cancer, and Other Tumors with Increased RET Activity	LOXO-292 (RET inhibitor)	Subbiah
2017-0186	An Open-Label, First-In-Human, Dose-Escalation Study to Evaluate the Safety, Tolerability, Pharmacokinetics, Pharmacodynamics, and Maximum Tolerated Dose and / or Recommended Phase II Dose of the ATR Inhibitor BAY 1895344 in Patients with Advanced Solid Tumors and Lymphomas	BAY 1895344 (ATR inhibitor) - Part A	Yap
2017-0180	Phase I Clinical Trial Evaluating the Safety and Response with PF-05082566, Cetuximab and Irinotecan in Patients with Advanced Colorectal Cancer	PF-05082566 (IgG2 mAB agonist of 4-1BB), Cetuximab (EGFR inhibitor) and Irinotecan (RAS inhibitor)	Hong
2017-0144	An Open Label Ascending Dose Study Evaluating The Safety/Tolerability, Pharmacokinetic and Pharmacodynamic Effects of KA2507 in Patients with Solid Tumors	KA2507 (HDAC6 inhibitor)	Tsimberidou
2017-0083	A Phase I/II, Open-Label, Safety, Tolerability, and Efficacy Study of Epacadostat in Combination With a PD-1 Inhibitor and Chemotherapy in Subjects With Advanced or Metastatic Solid Tumors (ECHO-207/KEYNOTE-723)	Epacadostat + PD-1 Inhibitor and Chemotherapy - Phase II	Naing
2017-0045	A Phase I, Open-Label, Dose-Escalation and Cohort Expansion First-in-Human Study of the Safety, Tolerability, Activity and Pharmacokinetics of REGN3767 (anti-LAG-3 mAb) Administered Alone or in Combination with REGN2810 (anti-PD-1 mAb) in Patients with Advanced Malignancies	REGN3767 (anti-LAG-3 monoclonal antibody) + REGN2810 (anti-PD-1 monoclonal antibody) Escalation combo	Yap
2017-0023	A Phase I Study to Evaluate the Safety and Tolerability of IACS-010759 in Subjects with Advanced Solid Tumors and Lymphoma	IACS-010759 (OXPHOS inhibitor)	Yap
2017-0014	Phase I/II Study to Evaluate the Safety and Tolerability of Avelumab in Combination with Other Anti-Cancer Therapies in Patients with Advanced Malignancies	Avelumab (anti-PD-L1 monoclonal antibody) + PF-04518600 (OX40 agonist) + XRT- Arm E	Naing
2016-1107	Phase I Dose Escalation, Multi-tumor Study to Assess the Safety, Tolerability and Antitumor Activity of Genetically Engineered MAGE-A4c1032T in HLA-A2+ Subjects with MAGE-A4 Positive Tumors	MAGE-A4c1032T (engineered T cells against MAGE-A4-directed T-cell receptors)	Hong

Protocol	Title	Drug & Mechanism of Action	PI
2016-1097	A Phase I Study Evaluating the Safety and Efficacy of MAGE-A3/A6 T Cell Receptor Engineered T Cells (KITE-718) in HLA-DPB1*04:01 Positive Subjects with Advanced Cancers	KITE-718 (Engineered T cells against MAGE-A3-directed T cell receptors) - Phase Ia	Kebriaei
2016-1092	A Phase Ib Study of OMP-305B83 plus Weekly Paclitaxel in Subjects with Platinum Resistant Ovarian, Primary Peritoneal or Fallopian Tube Cancer	OMP-305B83 (DLL4 antibody) + Paclitaxel (chemotherapy)	Fu
2016-1067	A Phase I/II Study Exploring the Safety, Tolerability, Effect on the Tumor Microenvironment, and Efficacy of Azacitidine in Combination With Pembrolizumab and Epacadostat in Subjects With Advanced Solid Tumors and Previously Treated Stage IIIB or Stage IV Non?Small Cell Lung Cancer and Stage IV Microsatellite-Stable Colorectal Cancer	Azacitidine (hypomethylating agent) + Pembrolizumab (PD-L1 inhibitor) + Epacadostat (IDO1 inhibitor)	Naing
2016-1029	A Phase I Immunotherapy Study of Evofosfamide in Combination with Ipilimumab in Patients with Advanced Solid Malignancies	Evofosfamide (Br IPM [bromo-isophosphoramide mustard] pro-drug)	Hong
2016-1007	A Phase I Study of the Highly-selective RET Inhibitor, BLU-667, in Patients with Thyroid Cancer, Non-Small Cell Lung Cancer (NSCLC) and Other Advanced Solid Tumors	BLU-667 (RET inhibitor) - Group 1	Subbiah
2016-0965	A Multicenter, Phase I, Open-Label, Dose-Escalation Study of ABBV-927, an Immunotherapy, in Subjects with Advanced Solid Tumors	ABBV-927 (anti-CD 40)	Subbiah
2016-0904	A Phase I, Open-label, Dose Escalation Study of Intravenous Administration of Single Agent BTP 114 In Patients with Advanced Solid Tumors and a Known Deleterious BRCA or DNA Repair Mutation	BTP-114 (albumin-binding cisplatin prodrug)	Tsimberidou
2016-0876	An Open-Label, Non-Randomized, Multicenter Phase I Study to Determine the Maximum Tolerated or Recommended Phase II Dose of Oral Mutant IDH1 Inhibitor BAY 1436032 and to Characterize Its Safety, Tolerability, Pharmacokinetics and Preliminary Pharmacodynamic and Anti-Tumor Activity in Patients with IDH1-R132X-Mutant Advanced Solid Tumors	BAY1436032 (IDH1 inhibitor)	Janku
2016-0850	A Phase I, Multicenter, Open-Label, Dose-Escalation Study of SGN-2FF in Patients with Advanced Solid Tumors	SGN-2FF (GMDS inhibitor [GDP-mannose 4,6-dehydratase])	Yap
2016-0845	A Phase I Study of TAK-228 (MLN0128) in Combination with Carboplatin plus Paclitaxel in Patients with Advanced Malignancies	TAK228 (mTOR inhibitor) + Paclitaxel + Carboplatin (chemotherapy)	Subbiah
2016-0842	Phase I study of C188-9, an oral inhibitor of signal transducer and activator of transcription (STAT) 3, in patients with advanced cancers	C188-9 (STAT3 inhibitor)	Tsimberidou
2016-0834	A Phase I, Open-Label, Dose Escalation and Dose Expansion Trial Evaluating the Safety, Pharmacokinetics, Pharmacodynamics, and Clinical Effects of Orally Administered CA-170 in Patients with Advanced Tumors and Lymphomas	CA-170 (anti-PD-L1 immune checkpoint inhibitor)	Meric-Bernstam
2016-0814	A Multicenter, Phase I, Open-Label, Dose-Escalation Study of ABBV-428, an Immunotherapy, in Subjects with Advanced Solid Tumors	ABBV-428 (anti-MSLN/CD40 immunotherapy)	Subbiah
2016-0798	A Phase I Open-Label Pharmacokinetics and Safety Study of Talazoparib (MDV3800) in Patients With Advanced Solid Tumors and Normal or Varying Degrees of Hepatic Impairment	Talazoparib (formerly BMN 673) (PARP inhibitor) - HEPATIC	Piha-Paul
2016-0797	A Phase I Open-Label Pharmacokinetics and Safety Study of Talazoparib (MDV3800) in Patients With Advanced Solid Tumors and Normal or Varying Degrees of Renal Impairment	Talazoparib (formerly BMN 673) (PARP inhibitor) - RENAL	Piha-Paul
2016-0708	An Open-Label, Dose-Finding and Proof of Concept Study of the PD-L1 ProbodyTM Therapeutic, CX-072, as Monotherapy and in Combination With Yervoy (Ipilimumab) or With Zelboraf (Vemurafenib) in Subjects With Advanced or Recurrent Solid Tumors or Lymphomas	CX-072 (anti-PD-L1 probody treatment) PART A	Naing
2016-0682	PiSARRO: p53 Suppressor Activation in Recurrent High Grade Serous Ovarian Cancer, a Phase Ib/II Study of Systemic Carboplatin/Pegylated Liposomal Doxorubicin Combination Chemotherapy With or Without APR-246	APR-246 (p53 analogue) +/- Carboplatin and pegylated liposomal doxorubicin	Fu
2016-0673	A Phase Ib/II Study to Assess the Safety and Efficacy of HBI-8000 in Combination with Nivolumab in Patients with Advanced Solid Tumors Including Melanoma, Renal Cell Carcinoma (RCC) and Non-Small Cell Lung Cancer (NSCLC)	HBI-8000 (HDAC inhibitor) + Nivolumab (anti-PD-L1 antibody)	Fu
2016-0666	Phase Ib, open-label, multi-center study to characterize the safety, tolerability and pharmacodynamics (PD) of PDR001 in combination with LCL161, everolimus (RAD001) or panobinostat (LBH589)	PDR001 (PD-L1 checkpoint inhibitor) + LCL161 (TNF death receptor inhibitor), Everolimus (mTOR inhibitor) or Panobinostat (HDAC inhibitor)	Pant
2016-0657	A Phase I/II, Open-Label, Multi-Center Study of the Safety and Efficacy of BLZ945 as Single Agent and in Combination with PDR001 in Adults Patients with Advanced Solid Tumors	BLZ945 (CSF-1R inhibitor) and PDR001 (PD-L1 checkpoint inhibitor) - Phase I	Naing
2016-0618	A Multicenter, Phase I/Ib, Open-Label, Dose-Escalation Study of ABBV-399, an Antibody-Drug Conjugate, in Subjects with Advanced Solid Tumors	ABBV-399 (ADC binding cMET)	Hong
2016-0596	A Phase I/II, Multicenter, Open-Label Study of MAK683 in Adult Patients with Advanced Malignancies	MAK683 (EED inhibitor)	Subbiah
2016-0595	A Phase I/II Dose-escalation of USL311 as Single Agent and in Combination with Lomustine (CCNU) in Subjects with Advanced Solid Tumors, with Subsequent Single Agent and Combination Phase II Cohorts for Subjects with Relapsed/Recurrent Glioblastoma Multiforme (GBM)	USL311 (CXCR4 antagonist) + Lomustine (alkylating cytotoxic agent) - Phase I (Part 2)	Janku
2016-0582	A Phase I Study of LY3200882 in Patients with Solid Tumors	LY3200882 (TGF-βRI inhibitor)	Yap
2016-0573	Strategic Alliance: Adoptive cellular therapy with endogenous CD8+ T-cells (ACTolog; IMA101) in patients with relapsed and/or refractory solid cancers	ACTolog (immunotherapy with endogenous CD8+ Tcells)	Tsimberidou

Protocol	Title	Drug & Mechanism of Action	PI
2016-0544	A Phase I Study of an ERK1/2 Inhibitor (LY3214996) Administered Alone or in Combination with Other Agents in Advanced Cancer	LY3214996 (ERK 1/2 inhibitor)	Pant
2016-0543	Multi-center, Open-label, Phase I, Dose-escalation, Cohort-expansion, First-in-Human Study of KHK2455 Administered as Mono-therapy and in Combination with Mogamulizumab (KW-0761) in Adult Subjects with Locally Advanced or Metastatic Solid Tumors	KHK2455 (ID01 inhibitor) +/- Mogamulizumab (anti-CCR4 monoclonal antibody)	Yap
2016-0533	Safety, Pharmacokinetics, and Pharmacodynamics of Escalating Oral Doses of the Arginase Inhibitor CB-1158 as a Single Agent and in Combination with Immune Checkpoint Therapy in Patients with Advanced/Metastatic Solid Tumors	CB-1158 (arginase inhibitor) - Part 2	Naing
2016-0532	Phase I Trial of ZW25 Alone and in Combination with Chemotherapy or Immunotherapy in Patients with HER2-expressing Cancers	ZW25 (Her2 inhibitor)	Meric-Bernstam
2016-0529	A Phase I, Open-Label, Multi-Center Dose Escalation Study of FAZ053 as Single Agent and in Combination with PDR001 in Adult Patients with Advanced Malignancies	FAZ053 (anti-PD-L1 IgG4 antibody) + PDR001 (anti-PD-1 IgG4 antibody)	Janku
2016-0515	Phase I cell dose escalation study to assess the safety and tolerability of genetically engineered MAGE-A10 c796T in HLA-A2+ subjects with MAGE-A10 positive urothelial, melanoma or head and neck tumors	MAGE-A10c796T (genetically engineered T cells)	Hong
2016-0481	A Phase I/II, Open-Label, Dose-Escalation, Safety and Tolerability Study of INCAGN01949 in Subjects with Advanced or Metastatic Solid Tumors	INCAGN01949 (anti-OX40 agonist antibody) - Part 2 Expansion	Naing
2016-0473	An Open-Label, Phase Ia/Ib Study of Ramucirumab in Combination with Other Targeted Agents in Advanced Cancers	Ramucirumab (VEGFR2 monoclonal antibody) + Abemaciclib (CDK4/CDK6 inhibitor) Arm 2	Fu
2016-0458	A Phase Ib Study of LY3039478 in Combination with Other Anticancer Agents in Patients with Advanced or Metastatic Solid Tumors	LY3039478 (Notch inhibitor) + Abemaciclib (CDK4/6 inhibitor) - Part C	Pant
2016-0430	Phase I Study of the Pan-ERBB Inhibitor Neratinib Given in Combination with Everolimus, Palbociclib or Trametinib in Advanced Cancer Subjects with EGFR Mutation/Amplification, HER2 Mutation/Amplification or HER3/4 Mutation	Neratinib (HER2 inhibitor) + Everolimus (mTOR inhibitor), Palbociclib (CDK4/CDK6 inhibitor), or Trametinib (MEK inhibitor)	Piha-Paul
2016-0394	A Phase Ib/II, Open Label, Multicenter Study of MCS110 in Combination with PDR001 in Patients with Advanced Malignancies	MCS110 (CSF-1 inhibitor) plus PDR001 (anti-PD-L1 antibody)	Naing
2016-0393	A Phase Ib/II Clinical Study of BBI608 Administered in Combination with Immune Checkpoint Inhibitors to Adult Patients with Advanced Cancers	BBI608 (STAT3 inhibitor) combined with Ipilimumab, Nivolumab or Pembrolizumab (immunotherapies)	Tsimberidou
2016-0386	Phase I/II Multicenter Trial of ICOS Agonist Monoclonal Antibody (mAb) JTX-2011 Alone or in Combination With Nivolumab in Adult Subjects with Advanced Refractory Solid Tumor Malignancies	JTX-2011 (ICOS agonist) - Part A dose escalation monotherapy	Yap
2016-0382	Phase Ib, Open-Label, Multi-Center Study to Characterize the Safety, Tolerability and Pharmacodynamics (PD) of PDR001 in Combination with CJM112, EGF816, Ilaris? (Canakinumab) or Mekinist (Trametinib)	PDR001 (anti-PD-L1) with canukinumab (anti-IL-1beta monoclonal antibody), CJM112 (anti-IL-17A antibody), EGF816 (EGFR inhibitor), or Trametinib (MEK inhibitor)	Fu
2016-0353	A Phase I/II Study of Safety and Efficacy of Ribociclib (LEE011) in Combination with Trametinib (TMT212) in Patients with Metastatic or Advanced Solid Tumors	Ribociclib (CDK4/6 inhibitor) + Trametinib (MEK inhibitor)	Janku
2016-0346	An Open-Label Study of Rovalpituzumab Tesirine in Subjects with Delta-Like Protein 3-Expressing Advanced Solid Tumors	Rovalpituzumab Tesirine (DLL3 inhibitor)	Hong
2016-0345	A Phase I/II Dose-Escalation and Cohort-Expansion Study of Oral eFT508 in Subjects with Advanced Solid Tumors	eFT508 (MNK1/2 inhibitor)	Meric-Bernstam
2016-0331	An Open-Label Phase II Multi-Cohort Trial of Nivolumab in Advanced or Metastatic Malignancies	Nivolumab (anti-PD-1 antibody)	Naing
2016-0322	An Open-label, Phase Ib study of NEO-PV-01 + Adjuvant with Nivolumab in Patients with Melanoma, Non-Small Cell Lung Carcinoma or Transitional Cell Carcinoma of the Bladder	NEO-PV-01 (Amino acid peptides vaccine) + Nivolumab (anti-PD-L1/L2)	Naing
2016-0308	A Phase Ia/Ib Study of a Novel Anti-PD-L1 Checkpoint Antibody (LY3300054) Administered Alone or in Combination with Other Agents in Advanced Refractory Solid Tumors	LY3300054 (anti-PD-L1 antibody) alone or combined with Ramucirumab (IgG1 anti-VEGFR monoclonal antibody)or Necitumumab (IgG1 anti-EGFR monoclonal antibody)	Yap
2016-0277	A Phase I/Ib open-label, multi-center, dose escalation study of GWN323 (anti-GITR) as a single agent and in combination with PDR001 (anti-PD-1) in patients with advanced solid tumors and lymphomas	GWN323 (anti-GITR) +/- PDR001 (anti-PD-1)	Piha-Paul
2016-0270	A Phase I/II Study of the Safety, Pharmacokinetics, and Pharmacodynamics of the Glutaminase Inhibitor CB-839 in Combination with Nivolumab in Patients with Advanced/Metastatic Melanoma, Renal Cell Carcinoma and Non-Small Cell Lung Cancer	CB-839 (glutaminase inhibitor) plus Nivolumab (anti-PD-L1)	Meric-Bernstam
2016-0270	A Phase I/II Study of the Safety, Pharmacokinetics, and Pharmacodynamics of the Glutaminase Inhibitor CB-839 in Combination with Nivolumab in Patients with Advanced/Metastatic Melanoma, Renal Cell Carcinoma and Non-Small Cell Lung Cancer	CB-839 (glutaminase inhibitor) plus Nivolumab (anti-PD-L1)	Meric-Bernstam
2016-0262	A Dose Escalation Study to Evaluate Safety, Tolerability, Pharmacokinetics, Dosimetry, Maximum Tolerated Dose and Preliminary Efficacy of Intra-Lesionally Injected Avidinox, followed by Systemic IV Administration of Escalating Doses of [177Lu]DOTA-Biotin in Patients with Solid Tumors or Lymphomas with Injectable Neoplastic Lesions.	AvidinOX (radiotherapy prologation system) followed by [177Lu]DOTA A-biotin (radiotherapy)	Subbiah

Protocol	Title	Drug & Mechanism of Action	PI
2016-0214	A Phase I Multicenter, Open-label, Study to Evaluate the Safety, Pharmacokinetics, Pharmacodynamics, Immunogenicity, and Antitumor Activity of MEDI0562 in Combination with Immune Therapeutic Agents in Adult Subjects with Advanced Solid Tumors	MEDI0562 (anti-OX40 agonist antibody) + Durvalumab (anti-PD-L1 antibody) or Tremelimumab (anti-CTLA4 antibody)	Piha-Paul
2016-0212	A Phase I Dose Escalation Study of ARQ 751 in Adult Subjects with Advanced Solid Tumors with AKT1, 2, 3 Genetic Alterations, Activating PI3K Mutations or PTEN-null	ARQ 751 (AKT inhibitor)	Pant
2016-0144	A Phase Ib Study of AZD1775 and Olaparib in Patients with Refractory Solid Tumours	AZD1775 + Olaparib (Wee1 inhibitor combined with PARP inhibitor)	Fu
2016-0108	Phase II Clinical Trial Evaluating Intravenous AZD9150 (antisense STAT3) with MEDI4736 (anti-PD-L1) in Patients with Advanced Pancreatic, Non-small Cell Lung Cancer, and Mismatch Repair Deficient Colorectal Cance	AZD9150 + MEDI4736 (STAT3 with anti-PD-L1)	Hong
2016-0104	A Phase I Dose Finding Study of Oral LTT462 in Adult Patients with Advanced Solid Tumors Harboring MAPK Pathway Alterations	LTT462 (ERK1/2 inhibitor)	Janku
2016-0021	A Phase I Open-Label Study of the Safety, Tolerability and Efficacy of KPT-9274, a Dual Inhibitor of PAK4 and NAMPT, in Patients with Advanced Solid Malignancies or Non-Hodgkin's Lymphoma	KPT-9274 (PAK4 and NAMPT inhibitor)	Naing
2015-1127	A Phase I study of PF-05082566 as a single agent in patients with advanced cancer, and in combination with rituximab in patients with Non-Hodgkin's Lymphoma	PF-05082566 (IgG2 monoclonal antibody agonist of 4-1BB)	Hong
2015-1115	A Phase I, Open Label, Multicenter Study of the Safety and Efficacy of MIW815 (ADU-S100) Administered by Intratumoral Injection to Patients with Advanced/Metastatic Solid Tumors or Lymphomas	STING agonist	Meric-Bernstam
2015-1075	An Open-label, Multicenter Phase Ia/IIa Trial Investigating the Safety, Tolerability and Antitumor Activity of Multiple Doses of Sym015, a Monoclonal Antibody Mixture Targeting MET, in Patients with Advanced Solid Tumor Malignancies	Sym015 (MET inhibitor)	Janku
2015-1003	A Phase I Dose Escalation Study Evaluating the Safety and Tolerability of PF-06671008 in Patients with Advanced Solid Tumors	PF-06671008, bi-specific T-cell-engaging therapy	Hong
2015-0971	A Phase I, Open-label, Multiple-ascending Dose Trial to Investigate the Safety, Tolerability, Pharmacokinetics, Biological and Clinical Activity of MSB0011359C in Subjects with Metastatic or Locally Advanced Solid Tumors and Expansion to Selected Indications	MSB0011359C (anti-PD-L1 antibody/TGFß receptor)	Naing
2015-0948	Phase II Study for the Evaluation of Efficacy of Pembrolizumab (MK-3475) in Patients with Advanced Types of Cancers	Pembrolizumab (PD-1 inhibitor)	Naing
2015-0942	A Phase I/Ib First-in-Human, Dose-Escalation Study to Evaluate the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of IPI-549 Monotherapy and in Combination with Nivolumab in Subjects with Advanced Solid Tumors	IPI-549 (PI3K-ipa inhibitor) + Nivolumab (PD-L1 inhibitor)	Hong
2015-0936	Phase II Trial of Salvage Radiation Therapy to Induce Systemic Disease Regression After Progression on Systemic Immunotherapy	Salvage radiation therapy	
2015-0913	A Phase I Dose Finding Study of Oral LXH254 in Adult Patients with Advanced Solid Tumors Harboring MAPK Pathway Alterations	LXH524 (BRAF/CRAF inhibitor)	Janku
2015-0912	Open-label, Multicenter Phase I/II Study of Mogamulizumab in Combination with Nivolumab in Subjects with Locally Advanced or Metastatic Solid Tumors	Mogamulizumab + Nivolumab (anti CCR4 antibody combined with growth factor-beta receptor I kinase inhibitor)	Hong
2015-0888	A Phase I, First-Time-in-Human Study of MEDI9197, a TLR 7/8 Agonist, Administered Intratumorally as a Single Agent in Subjects with Solid Tumors or CTCL and in Combination with Durvalumab and/or Palliative Radiation in Subjects with Solid Tumors	MEDI9197 (TLR7/8 agonist)	Hong
2015-0871	A Clinical Trial of Pembrolizumab (MK-3475) Evaluating Predictive Biomarkers in Subjects with Advanced Solid Tumors (KEYNOTE 158)	Pembrolizumab (PD-L1 inhibitor)	Piha-Paul
2015-0760	A Phase II Study of Abemaciclib in Patients with Brain Metastases Secondary to Hormone Receptor Positive Breast Cancer, Non-Small Cell Lung Cancer, or Melanoma	Abemaciclib (CKD4/6 inhibitor)	Fu
2015-0757	A Platform Study Exploring the Safety, Tolerability, Effect on the Tumor Microenvironment, and Efficacy of INCB Combinations in Advanced Solid Tumors	INCB039110 + INCB050465 (JAK inhibitor and PI3K-delta inhibitor) - Part B	Naing
2015-0728	A Phase II Basket Study of the Oral TRK Inhibitor LOXO-101 in Subjects with NTRK Fusion-Positive Tumors	LOXO-101 (TRK inhibitor)	Hong
2015-0688	A Phase I Study of Lxazomib and Erlotinib in Advanced Solid Tumor Patients	Ixazomib (Proteasome inhibitor) and Erlotinib (EGFR inhibitor)	Hong
2015-0687	A Multiarm, Open-label, Phase Ib Study of MLN2480 (an Oral A-, B-, and CRAF Inhibitor) in Combination With MLN0128 (an Oral mTORC 1/2 Inhibitor), or Alisertib (an Oral Aurora A Kinase Inhibitor), or Paclitaxel, in Adult Patients With Advanced Nonhematologic Malignancies	MLN2480 + Paclitaxel, Cetuximab, Irinotecan (A-, B-, and CRAF Inhibitor + microtubule inhibitor, EGFR inhibitor, DNA topoisomerase I inhibitor	Fu
2015-0641	An Open-Label Randomized Two-Arm Phase I Dose-Escalation Study to Characterize the Safety, Tolerability, Pharmacokinetics, and Maximum Tolerated Dose of Oral BAY 1217389 in Combination with Weekly Intravenous Paclitaxel Given in an Intermittent Dosing Schedule in Subjects with Advanced Malignancies	BAY 1217389 (monopolar spindle 1 [MPS1] inhibitor)	Subbiah

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2015-0621	A Multicenter Phase I, Open-Label, Dose-Escalation Study of DCC-2618 to Assess Safety, Tolerability, and Pharmacokinetics in Patients with Advanced Malignancies	DCC-2618 (KIT inhibitor)	Janku
2015-0480	A Phase I Open-Label, Multicenter, Dose-Escalation Study of PRN1371, a FGFR1-4 Kinase Inhibitor, in Adult Patients with Advanced Solid Tumors, followed by an Expansion Cohort in Patients with FGFR1, 2, 3, or 4 Genetic Alterations	PRN1371 (FGFR1-4 kinase inhibitor)	Piha-Paul
2015-0468	A Phase Ia/b Study to Evaluate the Safety and Tolerability of Etc-1922159 in Advanced Solid Tumours	ETC-1992159 (Wnt signaling regulator)	Subbiah
2015-0465	A Phase I/IIa Open-Label Study to Determine the Safety and Tolerability of ALRN-6924 in Patients with Advanced Solid Tumors or Lymphomas Expressing Wild-Type p53 Protein	ALRN-6924 (MDM2 inhibitor)	Meric-Bernstam
2015-0463	A Phase I/II, Multicenter, Open-Label Study of Oral FGF401 in Adult Patients with Hepatocellular Carcinoma or Solid Malignancies Characterized by Positive FGFR4 and KLB Expression	FGF401 (FGFR inhibitor) + PDR001 (PD-1 inhibitor)	Pant
2015-0411	A Multicenter Phase II Clinical Trial of Lurbinectedin (PM01183) in Selected Advanced Solid Tumors	Lurbinectedin (DNA minor groove binder)	Subbiah
2015-0353	A Phase Ib/II, Open-Label, Multicentre Study Assessing the Safety, Tolerability, Pharmacokinetics, and Preliminary Anti-tumor Activity of MEDI4736 in Combination with AZD9150 or AZD5069 in Patients With Advanced Solid Malignancies and Subsequently Comparing AZD9150 and AZD5069 Both as Monotherapy and in Combination with MEDI4736 as Second-Line Treatment in Patients With Recurrent and/or Metastatic Squamous Cell Carcinoma of the Head and Neck	MEDI4736 (IgG1 kappa monoclonal antibody) + AZD5069 (CRCX2 antagonist) - A3 Escalation	Hong
2015-0298	Phase I Evaluation of Intra-Arterial Adenoviral p53 (Ad-p53) in Combination with Capecitabine or Keytruda in Patients with Unresectable, Refractory Liver Metastases of Colorectal Carcinoma (CRC) and Other Solid Tumors as well as Primary Hepatocellular Carcinoma (HCC).	Ad-p53 (Adenoviral agent) + Capecitabine (DNA synthesis inhibitor)	Subbiah
2015-0263	A Phase I/II, open Label, Multicenter Study of the Safety and Efficacy of LAG525 Single Agent and in combination with PDR001 Administered to Patients with Advanced Malignancies	LAG525 + PDR001 anti-LAG-3 IgG4 antibody + anti-PD-1 IgG4 antibody	Hong
2015-0220	Phase I Dose-Escalation Study of Radio-Labeled Immunotherapeutic, FF-21101(90Y), for the Treatment of Advanced Cancer	FF-21101(90Y) (DOTA-conjugated chimeric human/mouse monoclonal antibody)	Subbiah
2015-0158	A Phase I/IIa Study to Assess the Safety, Pharmacokinetics, and Pharmacodynamics of PLX8394 in Patients with Advanced, Unresectable Solid Tumors	PLX8394 (BRAF inhibitor)	Janku
2015-0135	A Phase I Trial of Ipilimumab (Immunotherapy) and MGN1703 (TLR Agonist) in Patients with Advanced Solid Malignancies	Ipilimumab + MGN1703 (Immunotherapy combined with TLR agonist)	Hong
2015-0129	An Open Label Phase II Study of Tipifarnib in Advanced Non-Hematological Malignancies With HRAS Mutations	Tipifarnib (FTase [farnesyltransferase] inhibitor) - Cohort 1	Hong
2015-0035	A Phase I Study of COTI-2 for the Treatment of Advanced and Recurrent Gynecologic Malignancies	COTI-2 (p53 agonist)	Janku
2014-1099	A Phase I/II, Open-Label, Dose-Escalation, Safety and Tolerability Study of INCB054828 in Subjects With Advanced Malignancies	INCB054828 (FGFR inhibitor)	Subbiah
2014-1056	Phase Ia/Ib Study of the Oral TRK Inhibitor LOXO-101 in Adult Patients with Solid Tumors	LOXO-101 (TRK inhibitor)	Hong
2014-1045	A Phase I, Gene Alteration-Based, Open Label, Multicenter Study Of Oral Debio 1347 (CH5183284) In Patients With Advanced Solid Malignancies, Whose Tumours Have An Alteration Of The FGFR 1, 2 Or 3 Genes	Debio 1347 (CH5183284) (FGFR pan-inhibitor)	Meric-Bernstam
2014-1041	A Phase I/II Safety, Pharmacokinetic, and Pharmacodynamic Study of APS001F with Flucytosine and Maltose for the Treatment of Advanced and/or Metastatic Solid Tumors	APS001F (live bacteria suspension genetically engineered to express cytosine deaminase gene)	Fu
2014-1005	A Phase I/Ib Study of MGCD516 in Patients with Advanced Solid Tumor Malignancies	MGCD516 (MET, Axl, VEGFR, PDGFR, KIT, FLT3, Trk, RET, DDR2 and Eph inhibitor)	Pant
2014-0999	A Phase I, Multicenter, Open-Label Dose Escalation and Expansion Study of PCA062, Administered Intravenously In Adult Patients with Pcad-Positive Tumors	PCA062 (Antibody-drug conjugate targeting P-cadherin)	Subbiah
2014-0920	A Proof-of-Concept Study for Ilorasertib (ABT-348) Activity in Patients with CDKN2A-Deficient Advanced Solid Cancers: a Phase II Basket Trial	ABT-348 (Aurora kinase inhibitor)	Hong
2014-0893	A Phase I/IIa, Dose-Escalation Study of FF-10502-01 for the Treatment of Advanced Solid Tumors and Lymphomas	FF-10502-01 (Pyrimidine nucleoside antimetabolite)	Janku
2014-0809	A Phase I, Open Label, Dose Escalation Study of Immunoconjugate L-DOS47 in Combination with Standard Doublet Therapy of Pemetrexed/Carboplatin in Patients with Stage IV (TNM M1a and M1b) Recurrent or Metastatic Non-Squamous Non-Small Cell Lung Cancer	L-DOS247 + Pemetrexed/Caroboplatin Immunoconjugate (AFAIKL2 antibody)	Piha-Paul
2014-0753	A Phase I/II Study Exploring the Safety, Tolerability, and Efficacy of INCB024360 in Combination With MEDI4736 in Subjects With Selected Advanced Solid Tumors	INCB024360 + MEDI4736 enzyme indoleamine 2,3-dioxygenase 1 (IDO1) inhibitor combined with PD-L1 antagonist	Naing
2014-0640	Phase Ib Study to Evaluate the Safety of Selinexor (KPT-330) in Combination with Multiple Standard Chemotherapy Agents in Patients with Advanced Malignancies	Arm C - Selinexor (KPT-330) + Eribulin	Naing

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2014-0459	MY Pathway: An Open-Label Phase IIa Study Evaluating Trastuzumab/Pertuzumab, Erlotinib, Vemurafenib/Cobimetinib, Vismodegib, Alectinib and Atezolizumab in Patients who Have Advanced Solid Tumors with Mutations or Gene Expression Abnormalities Predictive of Response to One of These Agents	MY Pathway: Alectinib Arm	Meric-Bernstam
2014-0193	A Phase Ib Trial of LY2606368 in Combination with Cisplatin or Cetuximab in Advanced and/or Metastatic Tumors	LY2606368 (CHK1 inhibitor) + LY3023414 (PI3K inhibitor) Arm E2	Hong
2014-0186	Phase I Study of TAK-228 (MLN0128) in Combination with Metformin in Patients with Advanced Cancers	TAK-228 + Metformin (mTOR inhibitors)	Subbiah
2014-0160	A Phase I, Open-Label, Multicenter Study to Assess the Safety,Tolerability, Pharmacokinetics and Preliminary Anti-tumor Activity of Ascending Doses of AZD5363 under Adaptable Dosing Schedules in Patients with Advanced Solid Malignancies	AZD5363 (AKT inhibitor)	Meric-Bernstam
2014-0137	An open-label Phase I dose-escalation study to evaluate the safety, tolerability, maximum tolerated dose, pharmacokinetics, and pharmacodynamics of the anti-C4.4a antibody drug conjugate BAY 1129980 in subjects with advanced solid tumors known to express C4.4a	BAY1 129980 (anti-C4.4a antibody-drug conjugate)	Subbiah
2014-0119	Combination Treatment with Everolimus, Letrozole and Trastuzumab in Hormone Receptor and HER2/neu-positive Patients with Advanced Metastatic Breast Cancer and other Solid Tumors: Evaluating Synergy and Overcoming Resistance	Everolimus/Letrozole/Trastuzumab (mTOR inhibitor combined with aromatase inhibitor and HER-2 monoclonal antibody)	Janku
2014-0069	A Dose-Finding Phase I Study of TAS-120 in Patients with Advanced Solid Tumors with or without Fibroblast Growth Factor/Receptor (FGF/FGFR)-Related Abnormalities Followed by a Phase II Study in Patients with Advanced Solid Tumors or Multiple Myeloma with FGF/FGFR-Related Abnormalities	TAS-120 (FGFR inhibitor)	Meric-Bernstam
2014-0066	A Phase I, Open-Label, Dose-Escalation Study Evaluating the Safety, Pharmacokinetics, and Clinical Effects of Intravenously Administered PT-112 Injection in Subjects with Advanced Solid Tumors	PT-112 (phosphorylated platinum)	Karp
2013-0961	Phase II Study of the PARP Inhibitor BMN 673 (talazoparib tosylate) in Advanced Cancer Patients with Somatic Alterations in BRCA1/2, Mutations/Deletions in PTEN or PTEN loss, a Homologous Recombination Defect, Mutations/Deletions in Other BRCA Pathway Genes and Germline Mutation in BRCA1/2 (not breast or ovarian cancer)	BMN 673 Arms 1 - 3 (PARP inhibitor)	Piha-Paul
2013-0918	A Phase II, Open-Label, Study in Subjects with BRAF V600E-Mutated Rare Cancers with Several Histologies to Investigate the Clinical Efficacy and Safety of the Combination Therapy of Dabrafenib and Trametinib	Dabrafenib + Trametinib (BRAF inhibitor)	Subbiah
2013-0904	An Open-Label, Phase II Study of Neratinib in Patients with Solid Tumors with Somatic Human Epidermal Growth Factor Receptor (EGFR, HER2, HER3) Mutations or EGFR Gene Amplification	Neratinib (EGFR,HER2, HER3 inhibitor)	Piha-Paul
2013-0699	First-In-Human, Dose-Escalating Safety Study of Tissue Factor Specific Antibody Drug Conjugate (HuMax-TF-ADC) in Patients with Locally Advanced and/or Metastatic Solid Tumors Known to Express Tissue Factor	HuMax-TF-ADC (antibody-drug conjugate to tissue factor, with a microtubule inhibitor)	Hong
2013-0665	Phase I Study of MLN0128 (TAK-228) (NSC# 768435) in Combination with Ziv-Aflibercept (NSC# 724770) in Patients with Advanced Cancers	MLN0128 + Aflibercept (2013-0665)mTOR inhibitor + VEGF inhibitor	Naing
2013-0375	An Open-Label, Phase I/II, Dose Escalation Study Evaluating the Safety and Tolerability of GDC-0032 in Patients with Locally Advanced or Metastatic Solid Tumors or Non-Hodgkin's Lymphoma and in Combination with Endocrine Therapy in Patients with Locally Advanced or Metastatic Hormone Receptor-Positive Breast Cancer	GDC-0032 (PI3K-alpha, gamma and delta inhibitor)	Janku
2013-0257	A Phase I Multiple Ascending Dose Study of DS-3032b, an oral MDM2 inhibitor, in subjects with advanced solid tumors or lymphomas	DS-3032b (MDM2 inhibitor)	Hong
2012-0061	A Phase I Trial of Bevacizumab, Temsirolimus Alone and in Combination with Valproic Acid or Cetuximab in Patients with Advanced Malignancy	Bevacizumab + Temsirolimus (anti VEGF + mTOR inhibitor)	Piha-Paul
2011-1183	A Phase I Trial of Sorafenib (CRAF, BRAF, KIT, RET, VEGFR, PDGFR Inhibitor) or Crizotinib (MET, ALK, ROS1 inhibitor) in Combination with Vemurafenib (BRAF Inhibitor) in Patients with Advanced Malignancies	Vemurafenib+Crizotinib (BRAF inhibitor + angiogenesis inhibitor)	Janku
2011-0953	A Phase I Trial of Vandetanib (A Multi-Kinase Inhibitor of EGFR, VEGFR and RET inhibitor) in Combination with Everolimus (an mTOR inhibitor) in Advanced Cancer	Vandetanib + Everolimus (EGFR/VEGFR/RET inhibitor and mTOR inhibitor)	Subbiah
2011-0923	Phase I Study of Temsirolimus in Combination with Metformin in Patients with Advanced Cancers	mTOR inhibitors	Naing
2011-0686	A Phase I, open-label, dose escalation study of oral LGK974 in patients with melanoma and lobular breast cancer	Wnt pathway inhibitor	Janku
ECOGEAY131	Molecular Analysis for Therapy Choice (MATCH)	NCI MATCH (ECOGEAY131)	Meric-Bernstam
NCI9591	A Phase I Trial of Single Agent Trametinib (GSK1120212) in Advanced Cancer Patients with Hepatic Dysfunction	Trametanib for hepatic dysfunction Group C: moderate hepatic dysfunction	Subbiah
NCI9771	Phase I Study of Veliparib (ABT-888), an Oral PARP Inhibitor, and VX-970, an ATR Inhibitor in Combination with Cisplatin in Patients with Refractory Solid Tumors	Veliparib (PARP inhibitor) + VX-970 (ATR inhibitor) + Cisplatin (chemotherapy)	Piha-Paul

Protocol	Title	Drug & Mechanism of Action	PI
NCI9881	A Phase II Study of Cediranib in Combination with Olaparib in Advanced Solid Tumors	Cediranib (VEGFR tyrosine kinase inhibitor) + Olaparib (PARP-1/PARP-2 inhibitor)	Fu
NCI9149	Molecular Profiling-Based Assignment of Cancer Therapy for Patients With Advanced Solid Tumors	AZD1775 (WEE1 inhibitor) and Carboplatin (chemotherapy) or Everolimus (mTOR inhibitor) or Trametanib (MEK inhibitor) or Veliparib (PARP inhibitor) + Temozolomide (alkylating agent)	Raghav
NCI9944	Phase II Study of VX-970 (NSC# 780162) in Combination with gemcitabine versus gemcitabine alone in Subjects with Platinum-Resistant Recurrent Ovarian or Primary Peritoneal Fallopian Tube Cancer	VX-970 (ATR [ataxia telangiectasia mutated and Rad3-related kinase] inhibitor) with Gemcitabine (chemo)	Fu
NCI8808	An Early Phase I Study of ABT-888 in Combination With Carboplatin and Paclitaxel in Patients With Hepatic or Renal Dysfunction and Solid Tumors	ABT-888 (PARP inhibitor) + Carboplatin and Paclitaxel (chemotherapy)	Tawbi
PA11-1133	Oncogenic mutations in circulating tumor cells	Oncogenic mutations in circulating tumor cells	Hong
LAB09-0114	Immunocompetence in Advanced Cancer Patients Treated with Targeted Therapies: Blood Collection Study	Immunocompetence in Advanced Cancer Patients Treated with Targeted Therapies: Blood Collection Study	Hong
PA12-0381	A Study to Select Rational Therapeutics Based on the Analysis of Matched Tumor and Normal Biopsies in Subjects with Advanced Malignancies	WINTHER (appropriate therapy chosen based on analysis of matched tumor and normal biopsies)	Tsimberidou
PA13-0384	Determination of Circulating Tumor Cell Brain Metastasis Selected Marker Profile as a Correlate of Brain Metastasis	Determination of Circulating Tumor Cell Brain Metastasis Selected Marker Profile as a Correlate of Brain Metastasis	Hong
PA15-1068	Blood Collection from Physician-Identified Exceptional Responders to Treatment	Blood Collection from Physician-Identified Exceptional Responders to Treatment	Pant
S1609	DART: Dual Anti-CTLA-4 and Anti-PD-1 Blockade in Rare Tumors	Ipililumab (Anti-CTLA4) + Nivolumab (anti-PD-1)	Naing

Basket Trials Target Human Epidermal Growth Factor Receptor (HER) Mutations

The Department of Investigational Cancer Therapeutics (ICT) has been conducting exciting new research by Associate Professor and Program Director of the Phase I Fellowship, **Sarina Piha-Paul, MD**, (pictured) and colleagues using basket trials, a fairly recent innovation designed to test the efficacy of a single agent on different tumor types with a common mutation. Dr. Piha-Paul joined a unique worldwide collaboration called the SUMMIT trial, a global, nine-country multi-histology, open-label, Phase II basket study to evaluate the effects of neratinib on HER2- or HER3-mutant solid tumors in patients with a variety of malignancies.

It has been established that somatic HER2 (ERBB2) and HER3 (ERBB3) mutations are not limited to a single malignancy but can be found in a number of solid tumor types with a prevalence not exceeding 5-10% in any tumor type. Patients suffering from advanced solid tumors and locally documented HER2/HER3 mutations with several cancer types were evaluated, most commonly those with breast, lung, bladder, and colorectal cancers. Treatment responses were noted, primarily in patients with breast, cervical, biliary, salivary and non-small-cell lung cancers, leading to indication-specific cohort expansions. Responses in HER2 mutants varied by type of tumor and the specific HER2 mutation, suggesting that HER2 is a driver oncogene in some cancer and that not all mutations generate the same level of HER2 hyperactivity and/or oncogene dependence.

The groundbreaking information gleaned from SUMMIT represents the largest body of clinical data yet on the use of a pan-HER inhibitor in patients with solid tumors who have somatic HER2/HER3 mutations. This work has been foundational in leading the way for further studies that have the potential for unprecedented clinical benefit by determining how many patients can be effectively treated with anti-cancer agents using the basket study method compared to other clinical trial design strategies.

In another HER2 study, clinical investigators have incorporated a therapeutic strategy based on an emerging proprietary Anticalin™ technology platform for cancer, which is being developed by Pieris Pharmaceuticals. Anticalins are recombinantly engineered combined human proteins that can be used against several different types of targets.

Toward this end, Dr. Piha-Paul and her ICT colleagues are participating in a promising multicenter, open-label, Phase I dose escalation study of PRS-343 in patients with HER2-positive advanced or metastatic solid tumors to determine the dosing schedules and efficacy of these agents in patients for which standard treatment options are not an option due to lack of efficacy, tolerability, or patient refusal of standard therapy. ■

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How to Refer Patients for our Clinical Trials

Many of the new experimental medicines tested at MD Anderson are offered to patients through the Clinical Center for Targeted Therapy. The center is a leader in treating patients with drugs that are in Phase I of the clinical trials process.

The center offers many different types of experimental medications, such as new immunotherapies and chemotherapies. It also offers targeted therapies, which interfere with molecules that support cancer's growth, progression and spread. In some cases, the center carries out Phase II trials of these drugs.

Existing patients are referred to the center when one of our clinical trials offers the best treatment option. To make these decisions, we are in constant collaboration with MD Anderson's primary care centers. We also accept external physician referrals and patient self-referrals.

To request an appointment, call the patent referral hotline at 713-563-1930 and have the following information ready:

- Patient name, telephone number and insurance information
- Referring physician's name, office address, telephone and fax numbers
- Diagnosis
- Date of diagnosis
- How the diagnosis was made (physical exam, biopsy, other)
- What treatment, if any, has taken place
- Over what time period the treatment has occurred

Specific medical and pathology reports may also be requested for review before your first visit.

Not all referrals qualify for clinical trials. We will work with you to determine whether a patient qualifies and to schedule their first appointment. ■

ICT YEAR IN REVIEW

Figures represent fiscal year 2017 (Sept. 1, 2016 – Aug. 31, 2017).

Number of patients enrolled on treatment in FY17:
901

Total new patients & consult visits:
1,565

Established outpatient visits:
3,672

Inpatient visits:
3,536

Total number of therapeutic trials in progress:
166

Total number of new therapeutic trials opened:
77