

## Special Update: COVID-19 and IBC Research Program and Clinic Operations

The COVID-19 pandemic has had significant effects on the operations of our program and clinic. Starting in mid-March 2020, research and administrative staff began working 100% remotely to limit the on-site footprint and ensure the wellbeing of employees and patients. Physicians came to the hospital for their clinics and inpatient rotations, but otherwise worked remotely on their normal responsibilities in patient-care, research and administration. Meetings were all switched to Zoom, and we all learned how to function as remote teams.

Clinical research required substantial changes to normal practices. Patients already enrolled on clinical trials continued to see physicians and receive treatment, however, **new enrollments to our entire research portfolio were halted** for 2+ months. Some patients had to receive infusions locally rather than traveling to MD Anderson. Gradually, as the institutional restrictions opened up, as of July 2, we have now begun screening and enrolling new patients on all active IBC clinical trials, mindful of the need to push forward with providing the best treatment choices for patients diagnosed with this aggressive subtype of breast cancer. Throughout the pandemic, new IBC patients were seen in the IBC Multi-Team clinic on Wednesdays, and local new patients were also seen by the medical oncologists if they did not fit the multi-team criteria. Second-opinion (previously treated) patients from out of state were unable to be seen during the early part of the pandemic, but as of now, these patients are being accommodated due to the Breast Center being approved as a strategic service line for the institution. Operations are not back to status quo however. The **no-visitors policy** is still in place for existing patients with limited compassionate exceptions, however as of June 15<sup>th</sup>, new patients may have 1 healthy visitor for the first 14 days (starting at the date of the COVID-19 testing appointment). The MD Anderson website has a webpage about Coronavirus and how the hospital is altering procedures to enhance the safety of the environment – see [https://www.mdanderson.org/patients-family/becoming-our-patient/planning-for-care/coronavirus-protections.html?intcmp=HPFaces1\\_health\\_care\\_heroes\\_04222020](https://www.mdanderson.org/patients-family/becoming-our-patient/planning-for-care/coronavirus-protections.html?intcmp=HPFaces1_health_care_heroes_04222020).

Another change opportunity is the accelerated adoption of **telemedicine** for existing patients, which is here to stay. Initially patients who could not travel for care, had telephone follow up appointments. In early April, the institution rapidly rolled out a new Zoom-based video-application that utilized MyChart to allow patients to have scheduled video-conferenced appointments with their doctors. While some states do not yet allow video visits across state lines, many have embraced this new way of maintaining connection with specialists such as the oncology teams at MD Anderson.

On top of the clinical changes, laboratory research staff had to discontinue wet-lab experiments with only a few days of notice, including *in vivo* work in mice. Equipment had to be safely shut down, and our lab manager Mr Larry Coffey and several other designees were allowed to be on-site only to perform necessary oversight of precious resources such as frozen cell lines. During the approximate 10-week period of shut-down, trainees, principal investigators and staff scientists worked from home, analyzing data, attending seminars remotely, writing manuscripts and planning new experiments. Many took advantage of the time to learn new skills or participate in program committees to enhance infrastructure such as the clinical database. In June, the labs were gradually re-opened with some changes including shift-work to minimize the number of staff present at one time. To date, most of the lab staff who need to be on-site are back and grateful to be able to restart their important work.

COVID-19 is not over, and we are all aware that Houston is a current hotspot for infection. We are confident that MD Anderson is taking all the necessary precautions to keep our patients as safe as possible while providing the caring, science-based care we are known for.

## San Antonio Breast Cancer Symposium (SABCS) – Dec 2019

SABCS 2019 was the 42<sup>nd</sup> annual symposium organized jointly by AACR and the UT San Antonio Health Science Center. SABCS is now one of the premiere international breast cancer focused conferences where impactful research from across the spectrum of basic through clinical research is presented. MD Anderson usually has a strong presence at this meeting, and this year was no exception.

The following IBC program members had abstracts accepted for poster presentations at SABCS: Angela Alexander, Anthony Lucci, Cynthia Rodriguez, Emily Villodre, Hui Gao, Jason Lee, Kumiko Kida, Omar Rahal, Wintana Balema, and Xiaoding Hu. These presentation titles are listed in the presentation section toward the end of the newsletter.



## Updates on Advanced Breast Cancer Conference: Local Management and Other New Perspectives - February 28-29, 2020

Through the success of the conference in 2019, we were able to expand the conference from a one day to a two-day conference in 2020. Planned as an on-site event, unfortunately the conference had to be moved to the Marriott Medical Center at the last minute, due to the Houston water-main break that shut-off the water on campus the day before the event. Nevertheless, with the efficient oversight of Eric Gagneaux and the CME conference staff, as well as Dr Bora Lim, the chair, the event went very well and participants (healthcare providers and patients) found the networking beneficial.



Conference topics included a broad overview of the multi-disciplinary approach to the management of patients with IBC and metastatic breast cancer. Dr Carlos Arteaga, Professor and Director of the UTSW Comprehensive Cancer Center, gave an insightful keynote lecture on the development and future of CDK4/6 inhibitors in breast cancer, including mechanisms of resistance to these therapies. In addition to the significant focus on medical oncology topics, there was a strong emphasis on the cutting edge clinical research including genomically-driven trials as well as ER/HER2 targeted therapies. Speakers from other MD Anderson departments including investigational cancer therapeutics (phase 1), supportive care and plastic surgery rounded out the conference which aimed to improve the care of patients by enhancing knowledge, competence, performance and understanding of the patient perspective.



Photo Courtesy: Barry G Smith

## Treatment News

The Food and Drug Administration (FDA) has been quite busy approving new drugs for breast cancer, and there is much hope that IBC patients will similarly benefit from these advancements.

Dec 20, 2019 - DS-8201a/Trastuzumab Deruxtecan (Enhertu) - for HER2+ metastatic breast cancer after two or more prior anti-HER2 treatments for metastatic disease have failed. More information on the [FDA website](#).

Feb 25, 2020 - Neratinib (Nerlynx) with Xeloda - for HER2+ metastatic breast cancer after two or more prior anti-HER2 treatments for metastatic disease have failed. More information on the [FDA website](#).

April 17, 2020 - Tucatinib (Tuksya) with Herceptin and Xeloda for HER2+ metastatic breast cancer after one or more prior anti-HER2 treatments for metastatic disease have failed. So proud of our own Dr. Rashmi Murthy, who led the registration trial "HER2CLIMB" that led to this approval. The pivotal trial was published in NEJM. About 40% of IBC is HER2+, so undoubtedly relevant to our population. More information on the [FDA website](#) and [Dr. Murthy's article](#).

April 22, 2020 - It was just announced that sacituzumab govitecan (Trodelvy) was approved for patients with metastatic TNBC previously treated with at least two lines of metastatic treatments. In IBC, about 30% is triple-negative, and the recurrence rate is higher than other breast cancers, again making the need for better anti-metastatic therapies more critical to improved survival. More information on the [FDA website](#).

## New to the IBC Program

Our IBC team is growing! We are happy to share that new physician leaders have joined to expand our clinical operations at the MD Anderson TMC campus and regional HAL locations. Please join us in welcoming our new team members.



Susie Sun, MD, MS is our new IBC team member. Dr. Sun is an Assistant Professor in the Departments of Breast Surgical Oncology and Surgical Oncology at The University of Texas MD Anderson Cancer Center. She has accepted to support patient care at the IBC multi-team clinic, clinical research, and IBC program engagements. She received a Bachelor of Science in Biochemistry from Oberlin College and her Doctor of Medicine degree from Wright State Boonshoft School of Medicine. She then completed a residency in general surgery at Penn State University, followed by a fellowship in breast surgical oncology at The University of Texas MD Anderson Cancer Center.

Visit Dr Sun's profile page at [https://faculty.mdanderson.org/profiles/susie\\_sun.html](https://faculty.mdanderson.org/profiles/susie_sun.html)



Sadia Saleem, MD, is our new IBC- HAL Leader, and assistant professor in Breast Medical Oncology. Dr. Saleem supports our IBC program collaboration with the Houston Area Location (HAL) teams to accelerate program expansion. She is a breast medical oncologist in the Sugar Land location, and on Friday, she sees patients in the TMC location. She completed her internal medicine residency at Baylor College of Medicine in Houston, Texas, and fellowship in hematology and oncology at UT Southwestern in Dallas, Texas. Visit Dr. Saleem's profile page at

[https://faculty.mdanderson.org/profiles/sadia\\_saleem.html](https://faculty.mdanderson.org/profiles/sadia_saleem.html)

## Recent Awards, Honors and Grants

We congratulate the following individuals, recognized for their significant accomplishments in IBC research:

**Dr Xiaoping Wang** received a 3-year grant from the Emerson Collective Cancer Research Fund in March for the research project titled "**Enhancing EGFR-targeted therapy by blocking immunosuppression in the tumor microenvironment in inflammatory breast cancer.**"

We would also like to congratulate **Dr Chandra Bartholomeusz**, Associate Professor in Breast Medical Oncology for being awarded term-tenure in FY2020 and being selected for the AAMC Mid-Career Women Faculty Leadership Development Seminar. Participation in this seminar is limited to female faculty with high potential for academic leadership and continued career development.

## Recent Publications

**An Inflammatory Imposter: Three Cases of Mullerian Carcinoma Appearing as Inflammatory Breast Cancer** was published by The Breast Journal. **Authors:** Stephen R Grant, Savitri Krishnamurthy, Carissa Le-Petross, Vicente Valero, Mediget Teshome, Wendy A Woodward. DOI: <https://doi.org/10.1111/tbj.13757>

**Advancing Cancer Research and Medicine with Single-Cell Genomics** was published by Cancer Cell. **Authors:** Bora Lim, Yiyun Lin, and Nicholas Navin. DOI: <https://doi.org/10.1016/j.ccell.2020.03.008>

**Differential functions of ERK1 and ERK2 in lung metastasis processes in triple-negative breast cancer** was published by Scientific Reports. **Authors:** Maria Gagliardi, Mary Kathryn Pitner, Jihyun Park, Xuemei Xie, Hitomi Saso, Richard A. Larson, Rachel M. Sammons, Huiqin Chen, Caimiao Wei, Hiroko Masuda, Gaurav Chauhan, Kimie Kondo, Debu Tripathy, Naoto T. Ueno, Kevin N. Dalby, Bisrat G. Debeb & Chandra Bartholomeusz  
DOI: <https://doi.org/10.1038/s41598-020-65250-3>

## News/Events

August 2020	ZTA Fellowship Award Call for Abstracts	Submission dates: August 10-August 31, 2020
Announcement - <a href="https://drive.google.com/file/d/1QfeHn5ZsTMc_HFzeHHfvEZxp3qwh3Nvd/view?usp=sharing">https://drive.google.com/file/d/1QfeHn5ZsTMc_HFzeHHfvEZxp3qwh3Nvd/view?usp=sharing</a>		
Application form - <a href="https://drive.google.com/file/d/1SxRNPzwE5eE65mxBjb6IsFRXRCwZh37y/view?usp=sharing">https://drive.google.com/file/d/1SxRNPzwE5eE65mxBjb6IsFRXRCwZh37y/view?usp=sharing</a>		
October 2020 (TBD)	Virtual IBC High Tea / Lite Bites Event	
November 7, 2020	Boot Walk MD Anderson Cancer Center	Registration is now open. Please visit the Boot Walk website to register and kick start your fundraising. <a href="http://www.mdanderson.org/bootwalk">www.mdanderson.org/bootwalk</a> Join team IBC Wranglers

## IBC Program Presentations (December 2019 – April 2020)

**2020-0198 - Tepotinib and Neratinib combination in metastatic IBC with HER2 pathway activation measured by CELsignia Dynamic Signaling Function Analysis**  
*Bora Lim, MD*  
*Assistant Professor, Breast Medical Oncology*

**A single-arm clinical trial to evaluate the safety and efficacy of panitumumab, pembrolizumab, and chemotherapy in primary triple-negative inflammatory breast cancer**  
*Sudpreeda Chainitikun, MD*  
*Postdoctoral Fellow, Breast Medical Oncology*

## Guest Speakers



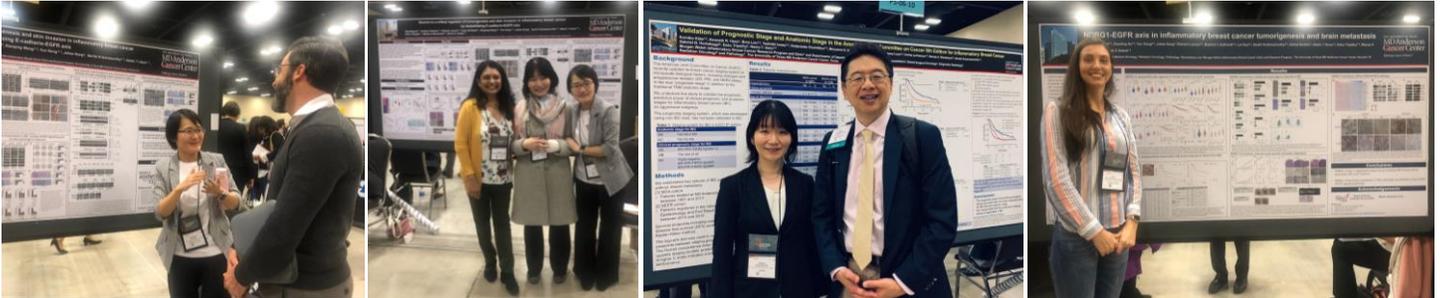
**Navigating Life's Roadmap after Breast Cancer**  
*Dr. Jennie M. Bennett*  
*Director and Founder - Reconstruction of a Survivor*



**About Chomsky, Patterns, non-coding DNA's and RNAs and Genomic Immunity**  
*Dr. George Calin*  
*Professor Experimental Therapeutics, Co-Director, The RNA Interference, and non-coding RNA Center, Co-Director MD/Ph.D. Program, adjunct appointment, Professor Department of Leukemia, UT MD Anderson Cancer Center*

## External IBC Program Research Presentations

### December 2019 SABCS Presentations



- Real-world deficiencies in IBC patient care: A patient-led survey of care patterns across the US  
Arnold TL, McMordie K, Alexander A.
- A pilot study to examine the feasibility of measuring CTC and inflammatory biomarker changes resulting from atorvastatin as adjuvant therapy in TNBC and TN-IBC patients with residual disease after neoadjuvant chemotherapy  
Alexander A, Fujii T, Stauder MC, Woodward WA, Reuben JM, Shen Y, Liu D, Reddy SM, Valero V, Gilchrist SC, Lim B, Lucci A, Ueno NT, Barcenas CH.
- Decorin-mediated suppression of tumorigenesis and skin invasion in inflammatory breast cancer via inhibition of the E-cadherin/EGFR axis  
Hu X, Villodre ES, Larson R, Rahal O, Wang X, Krishnamurthy S, Tripathy D, Ueno NT, Woodward WA, Debeb BG.
- NdrG1-egfr axis in inflammatory breast cancer tumorigenesis and brain metastasis  
Schlee Villodre E, Hu X, Larson R, Eckhardt BL, Gong Y, Huo L, Song J, Krishnamurthy S, Ibrahim N, Ueno NT, Tripathy D, Woodward WA, Debeb BG
- Inflammatory breast cancer exhibits amplification and transcriptional activation of MYC in conjunction with NOTCH and TGF $\beta$  signaling  
Rypens C, Bertucci F, Viens P, Martens JWM, Smid M, Schröder C, Ueno NT, Cristofanilli M, Dirix P, Vermeulen P, Dirix L, Van Laere S.
- Peripheral T cell clonality and exhaustion as novel biomarkers for anti-PD-1 (pembrolizumab) maintenance therapy in patients with metastatic inflammatory breast cancer (mIBC) and non-IBC triple negative breast cancer (mTNBC)  
Gao H, Kida K, Cohen EN, Alexander A, Lim B, Parker C, Tin S, Valero V, Tripathy D, Reuben A, Ueno NT, Reuben JM
- Poster Discussion Session: Estrogen receptor  $\beta$  suppresses metastasis of inflammatory breast cancer by regulating signaling that promotes cytoskeleton remodeling  
Thomas C, Karagounis I, Srivastava R, Kumar S, Francois N, Nikolos F, Bado I, Chao H, Koumenis C, Krishnamurthy S, Ueno NT, Chakrabarti R, Maity A.
- Circulating tumor cells detected after neoadjuvant therapy for inflammatory breast cancer are associated with early relapse despite pCR  
Hall C, Meas S, Narendran B, Sarli V, Upshaw J, Ueno N, Lim B, Valero V, Lucci A
- Validation of prognostic stage and anatomic stage in the American Joint Committee on Cancer 8th Edition for Inflammatory Breast Cancer  
Kida K, Hess KR, Lim B, Iwase T, Chainitikun S, Sapon ME, Valero V, Lucci A, Le-Petross C, Woodward WA, Krishnamurthy S, Hortobagyi GN, Tripathy D, Ueno NT.

- An in vitro microfluidic tumor platform for modeling and investigating tumor stromal interactions in inflammatory breast cancer  
Gadde M, Phillips C, Rahal O, Woodward W, Rylander M, Yankeelov T.
- Transcriptome analysis of patient derived xenograft mouse models of inflammatory breast cancer to gain insights into the contribution of tumor microenvironment  
Rahal O, Yang J, Li L, Larson R, Van Laere S, Ueno N, Sulman E, Woodward W
- Inflammatory breast cancer (IBC) defined: proposed common diagnostic criteria and scoring - moving beyond the subjective 'clinical diagnosis' of IBC to advance research  
Mason G, Overmoyer BA, Woodward WA, Badve S, Schneider RJ, Jagsi R, Lang JE, Alpaugh M, Smith K, Miller K.
- Modeling limited breastfeeding and diet on IBC like tumor progression  
Balema W, Larson R, Van Whye R, Ye R, Ning J, Rahal O, Stecklein S, Krishnamurthy S, El-Zein R, Woodward W.
- Establishing the content domain for a patient-reported outcomes measure to evaluate the unique symptom burden of inflammatory breast cancer  
Whisenant M, Alexander A, Williams LA, Woodward W, El-Zein R, Ueno NT

### **April 2020 AACR Presentation**

- Mechanism of MEK inhibitor resistance in triple-negative breast cancer.  
Maria Gagliardi, Moises Tacam, Lakesla Iles, Yuan Qi, Lajos Pusztai, Debu Tripathy, Geoffrey Bartholomeusz, Chandra Bartholomeusz

## Current Clinical IBC Trials Open for New Patient Enrollment

### **Neoadjuvant (newly diagnosed):**

- 2016-0177 - A randomized phase II study of neoadjuvant Carboplatin/Paclitaxel (CT) versus Panitumumab/Carboplatin/Paclitaxel (PaCT) Followed by anthracycline-containing regimen for newly diagnosed primary triple-negative inflammatory breast cancer
- 2016-0537 - A phase 1b study of neratinib, pertuzumab and trastuzumab with taxol (3HT) in metastatic and locally advanced breast cancer, and phase II study of 3HT followed by AC in HER2 + primary IBC, and neratinib with taxol (NT) followed by AC in HR+ /HER2- primary IBC
- 2018-0002 - Phase II study of combination ruxolitinib (INCB018424) with preoperative chemotherapy for triple-negative inflammatory breast cancer

### **Adjuvant (after surgery and radiation):**

- 2016-0096 - A phase II study of anti-PD1 (Pembrolizumab) in combination with hormonal therapy in patients with hormone-receptor (HR)-positive localized inflammatory breast cancer (IBC) who did not achieve a pathological complete response (pCR) to neoadjuvant chemotherapy
- 2018-0550 - Atorvastatin in triple-negative breast cancer (TNBC) patients who did not achieve a pathologic complete response (pCR) after receiving neoadjuvant chemotherapy, a multicenter pilot study

### **Radiation:**

- SWOG1706 - A phase II randomized trial of olaparib administered concurrently with RT vs. RT alone for inflammatory breast cancer

### **Metastatic IBC:**

- 2014-0533 - A phase II study of anti-PD1 (MK-3475) therapy in patients with metastatic inflammatory breast cancer (IBC) or non-IBC triple-negative breast cancer (TNBC) who have achieved clinical response or stable disease to prior chemotherapy.
- 2016-1096 - A Phase I Study of OTS167PO, a MELK inhibitor, to Evaluate Safety, Tolerability, and Pharmacokinetics in Patients with Advanced Breast Cancer and Dose-Expansion Study in Patients with Triple Negative Breast Cancer.
- 2016-0890 - A phase II study of triple combination of Atezolizumab, Cobimetinib, and Eribulin (ACE) in patients with chemotherapy-resistant metastatic inflammatory breast cancer
- 2018-0493 - An open-label, multicenter, phase 1b/2 Study of Rebastinib (DCC-2036) in combination with paclitaxel to assess safety, tolerability, and pharmacokinetics in patients with advanced or metastatic solid tumors



## Current Clinical IBC Lab Studies:

Currently, we have 10 open clinical IBC laboratory studies which collect blood and tissue for analysis of host and tumor biology and clinical correlates.

If you are interested in learning more about our clinical trials, or lab studies, please email the Morgan Welch Inflammatory Breast Cancer Research Program and Clinic directly at [ibcp@mdanderson.org](mailto:ibcp@mdanderson.org). We are happy to provide general information and eligibility guidelines for our clinical trials and laboratory studies.

## Facebook Live

Monthly live chats with Drs Naoto Ueno and Angela Alexander are informal opportunities to learn about new discoveries, treatments and ongoing research that relates to IBC and metastatic breast cancer. Questions received beforehand or during the video are addressed by the panelists. Follow our Facebook page for event notifications and/or contact us at [ibcp@mdanderson.org](mailto:ibcp@mdanderson.org) to receive an email notification.

 Facebook: [www.facebook.com/InflammatoryBreastCancer](https://www.facebook.com/InflammatoryBreastCancer)  Twitter: [www.twitter.com/InflammatoryBCa](https://www.twitter.com/InflammatoryBCa)

### Newsletter Committee

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