## Valerie

## Cancer Research Advocate

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Attending SABCS 2023 for patients and advocates is an exciting and engaging experience! It's the world's leading breast cancer conference and this year attracted over 10,000 attendees including leading researchers, clinicians, advocates and patients from around the world. Many of the sessions presented release impactful and sometimes practice changing data for patients from cutting edge clinical trials. Insights shared in posters and poster sessions by emerging leaders from leading cancer research institutions serve to spur on important future research and clinical trials. There is always so much to learn and so many sessions to attend, so it's a challenge to choose which to attend each day. At night the learning continues for patients and advocates at the Alamo Breast Cancer Hot Topics Sessions. We gather together at the end of each day to connect with our fellow advocates and to listen to some of the leading breast cancer experts who help to summarize the most important sessions of each day in more "patient friendly" language with Q \& A follow-up.

I enjoyed attending my first Educational Session on Tuesday afternoon on Lobular Breast Cancer (LBC) and hearing Christine Desmedt of KU Leuven in Belgium speak on the biological peculiarities of invasive lobular breast cancer (ILC). As more attention is being focused on ILC research, it's important as Christine explains to understand that LBC is the 2nd most common type of breast cancer with most LBCs being primarily hormone driven. She explained how $50 \%$ are classical subtypes and $50 \%$ are non-classical, with non-classical being associated with greater recurrence. There is also important ongoing work to harmonize diagnosis guidelines worldwide, for the benefit of patients. Regarding genomics, E-cadherin is the hallmark of ILC with mutations across the whole gene. $53 \%$ of ILC can be Her2 low. Her2 mutations are especially common in metastatic ILC. FOXA1 mutations are most common in ILC, being associated with progression and AI resistance. The Pi3K/AKT pathway is activated in a large number of ILC tumors, and most relevant for targeted therapies. Interestingly, she explains when comparing primary vs metastatic ILC, there are many different mutations, and many of those in metastasis are associated with endocrine resistance. In a ctDNA comparison study of ILC vs NST, hormone driven ILC had more E-cadherin, ERBB2, PTEN, FGFR2 and NF1 mutations. The take home message being that more than $50 \%$ of metastatic ILC is associated with endocrine resistance and liquid biopsies can be informative. In explaining the differences in the tumor microenvironment, she noted that macrophages were predominant in ER+ ILC vs NST and that there was a higher IGF-1 expression in ILC, with loss of E-cadherin being involved in activation of this pathway vs NST. Lobular tumors also infiltrate between adipocytes, which needs to be further explored and understood. It is clear there are many differences in the TME with ILC, so more investigation of the TME will be greatly needed. This was just a short summary of one part of the full session which was most informative. The other speakers in this session were also outstanding! This session was a great start to the conference.

Next I'd like to highlight a very impactful Hot Topics session which I found most interesting. On Thursday night Alamo hosted a number of speakers covering the important sessions of the day. I was particularly interested and excited to hear Dr. David Mankoff, MD, PhD from the University of Pennsylvania speak about a new and exciting estradiol labeled F-18 radioisotope for PET imaging which allows for improved staging for early stage and late stage ER+ breast cancer.Dr. GaryUlaner, MD,
PhD gave a presentation on Tuesday in the Product Theater and discussed how this technology has opened the door to ER targeted imaging and this more precise ER assessment has led to improvements in clinical care. Their future work will be using this imaging for developing ER-targeted radioligand therapies, which is in process and an interesting prospect. As Dr. Mankoff explained in Hot Topics, the challenge is if endocrine therapies taken at the time of PET imaging, might significantly impact the imaging results. This is a challenge as well in PET-FDG imaging for patients in treatment. More research is ongoing in this area which will provide an answer to this question. The important factor is that this new imaging is available at several major cancer centers, can impact the detection and staging of early ER+ breast cancer and could be particularly impactful for detecting ER+ lobular breast cancer and detection of micro-metastatic disease. It's exciting to see that imaging agents are evolving in breast cancer that will have a significant impact on the way certain breast cancers are detected and provide a more personalized approach to treatment. As Dr. Mankoff indicated, imaging is not only a way to find the disease but also can help guide treatment choices and how effective they will be.

The posters are always a highlight, and it was great to see all the innovative research taking place in breast cancer and with so many this year focused on lobular breast cancer. One of the things I thought was so impactful this year, was the inclusion of breast cancer advocates in the conference both speaking at sessions, participating in panel discussions and being moderators. It was also great to network with other advocates both at the Alamo Hot Topics sessions and in the Advocate Lounge. Bringing in the live feed of sessions in the Advocate Lounge allowed us to stay a little longer networking and meeting other advocates while still being able to catch the next session.

I am always excited to share all of the information learned at SABCS 2024 with patients, and elevate awareness and education about ILC to patients and researchers through my national and international advocacy work. I have already shared some of the key relevant information from the conference sessions with other patients and advocates and have been exploring some collaborative efforts with researchers. I will be involved in several international conferences this year, and plan to use what I learn regarding ILC research to expand education and research internationally through these opportunities.

