

Letter from Dr. Lin

I'm excited to introduce this new issue of the EMBRACE newsletter. You will hear from a woman living with metastatic breast cancer (MBC), meet the team for the new EMBRACE program, and learn about immunotherapy and how it is being studied.

Over the past year, we have been working hard to develop and expand the EMBRACE clinical program, as well as the EMBRACE research study. Our goal is for every Dana-Farber MBC patient to have an EMBRACE coordinator who will help you to access the many clinical and supportive services at Dana-Farber, and who will work with your doctor to track your health status and to identify clinical trial opportunities. For people who come for second opinions, the coordinator will help your local oncologist and Dana-Farber oncologist work even more smoothly together. Over time, we hope to add more features to always ensure the best possible care.

We were so happy to see so many of you on September 24 at our 5th annual Metastatic Breast Cancer Forum for patients and families. We shared exciting advances in MBC treatment and provided opportunities to interact.

Please check out the recent webcasts and other educational resources on page 4. If you are interested in receiving more frequent email newsletters with resource updates, please send an email to embrace@partners.org.

We are always open to your feedback. Many of our articles, webcasts, and forum topics are a direct result of your suggestions. Send us your comments and questions at embrace@partners.org.

Warm regards,
Nancy Lin, MD




"The EMBRACE program is all about serving our patients in the best way possible, while also advancing knowledge and new therapies."

—Eric Winer, MD, director of Breast Oncology at the Susan F. Smith Center for Women's Cancers

EMBRACE program

WE ARE PLEASED TO ANNOUNCE OUR NEW CLINICAL PROGRAM FOR PEOPLE WITH METASTATIC BREAST CANCER. THIS NEW PROGRAM WILL SHARE THE NAME EMBRACE (ENDING METASTATIC BREAST CANCER FOR EVERYONE), WHICH WILL ALSO CONTINUE TO BE THE NAME OF OUR RESEARCH STUDY.

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The new EMBRACE clinical program will help us in our goal of always striving to offer the best and most personalized treatment options for metastatic breast cancer patients. The focus of the EMBRACE clinical program is to facilitate connections to services and supports for Dana-Farber patients near and far. One of our patients shares her experiences with the EMBRACE program on page 4.

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EMBRACE staff

Melissa Hughes, MSc, Senior Research Project Manager



Melissa worked on cancer research projects in the Population Sciences Department at Dana-Farber for 13 years before joining the Breast Oncology group two years ago. She works with Dr. Lin to oversee the EMBRACE program,

as well as other breast cancer-specific studies, including tissue banking and clinical databases.

EMBRACE Clinical Coordinators



Maggie Merrill

Originally from the Boston area, Maggie went away for school in Pennsylvania, then returned to work and live in Boston. She hopes to continue on in the

healthcare field and become a genetic counselor.



Rebecca Santiago

Rebecca graduated from Pennsylvania State University in 2015 with a degree in neuropsychology and hopes to pursue medical school in the future. She recently moved from NYC to Boston.



Nicole Kuhnly

Nicole is one of five children, with a fraternal twin sister, and she recently graduated from the College of the Holy Cross as a psychology

major. She hopes to eventually attend medical school or pursue another career in healthcare.



Lindsey Crowley

Lindsey recently graduated from the College of the Holy Cross where she studied cell and molecular biology. She previously conducted

research with the Vascular and Endovascular Surgery Laboratory at MGH.

Patient profile

Sophia | Mother, manager, MBC patient

SOPHIA WAS DIAGNOSED WITH METASTATIC BREAST CANCER FIVE MONTHS AGO. A RECENT MAMMOGRAM HAD BEEN NORMAL, AND SHE WAS “ABSOLUTELY HEALTHY. I’M 44 YEARS OLD. IT WAS A COMPLETE SHOCK TO BE DIAGNOSED WITH STAGE 4 BREAST CANCER,” SHE RECALLS.

“I live in the Midwest, but I wanted to get established as a DFCI patient so I would know about new research coming up,” Sophia explains. Her DFCI oncologist, Dr. Krop, affirmed her local oncologist’s treatment approach, and advises them both when issues arise.

During her DFCI visit, coordinators told Sophia about the EMBRACE program. “I was so glad they wanted to access my biopsy samples for research. MBC doesn’t get as much funding as other cancers. I have a 17-year-old son. He wants me to see my grandchildren. I want to thank the doctors and researchers for their hard work and for not giving up.”

Sophia continues to be in touch with the EMBRACE coordinators. “They have been fabulous. I usually use email to communicate with them, because I’m busy

during the day—I supervise 25 people at a big company. They get back to me quickly. For people like me with a lot going on—work, medical bills, not feeling well, getting scared sometimes—it’s important to have someone who follows up with you and offers information and help.”

Although she had a hysterectomy in June, Sophia hasn’t told many people about her diagnosis. “I’m trying to live my life as I used to, but the medications are strong—they make me tired, and I have side effects. I feel like I’m in a vacuum because everyone talks about breast cancer survivors who are ‘cured,’ but I never will be unless researchers find something for people like me. That’s why I’m so grateful to everyone at DFCI, and I’m happy to contribute as much as I can to help their research.”

Sophia’s name and other personal details have been altered slightly to protect her confidentiality.



Gunjan Gupta

Gunjan graduated from Trinity College in

2015 (Go Bants!). She has always been interested in medicine and is looking forward to having a career in the healthcare field.



Kathryn Silva

Kathryn graduated from Suffolk University in 2014 with a Bachelor of Science in

radiation biology, and has used her interests in medical oncology and clinical treatment throughout her career in the Breast Oncology Center. She hopes to stay involved in cancer research.

Immunotherapy for breast cancer

FOR MANY DECADES, RESEARCHERS HAVE HOPED TO FIND WAYS TO TRAIN A PERSON'S IMMUNE SYSTEM TO RECOGNIZE AND TARGET THEIR OWN CANCER CELLS. IMMUNOTHERAPY REFERS TO TREATMENTS THAT HELP A PERSON'S IMMUNE SYSTEM TO DO THIS.

Possible advantages

The hope is that by training a person's immune system to recognize cancer, the immune system can adapt as the cancer changes. This means some people's cancer could be under control for a long time.

Possible downsides

Immunotherapy does not work in everyone. On their own, current drugs only work in a small number of people. And immunotherapy can cause potentially serious side effects from the immune system being overstimulated, such as abnormal thyroid function, diarrhea, rash, or other autoimmune problems. We are learning more about side effects through our ongoing clinical trials.

Immunotherapy clinical trials

Results of clinical trials in other cancers, such as melanoma, have been very encouraging. Some people have had their cancer under control for years.

There aren't any approved immunotherapy drugs for breast cancer currently, because the clinical trials to see if they offer advantages over standard treatments are still ongoing.

Triple-negative breast cancer is the subtype we've studied most with immunotherapy. Phase 3 clinical trials are underway, and we hope to have results in the next one to three years.

Clinical trials are also testing tumor tissue to predict who might and who will not benefit from immune-based treatment.

For other types of breast cancer, including estrogen receptor (ER)-positive, we are still working out how to use immunotherapy. It is very likely

that immunotherapies in other cancer types will be tested in clinical trials, in combination with radiation, chemotherapy, and other targeted treatments.

Finding an immunotherapy clinical trial

Ask your doctor if there is a clinical trial that would fit you. Visit clinical trial websites (see page 4) to find available studies across the nation.

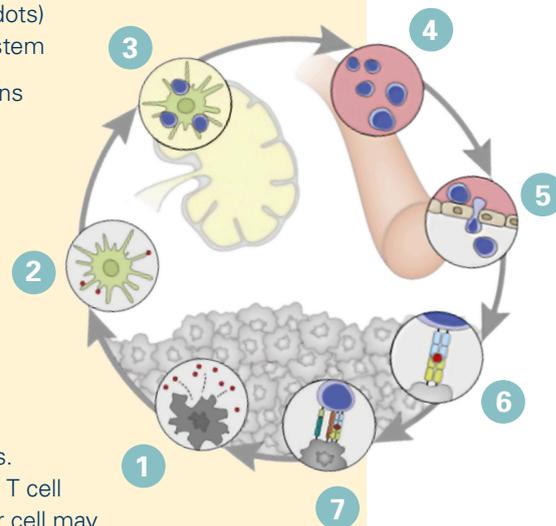
Why use the immune system? Because cancer cells constantly change, it's difficult to find treatments that knock them out completely. The possible benefit of helping the body's immune system target cancer cells is that the immune system can potentially change and evolve to keep up with the cancer.

Cancer resistance Cancer cells can become resistant to treatments in many ways. They can:

- Develop changes in their DNA that may allow them to survive traditional treatments like chemotherapy and hormonal therapy
- Rid themselves of chemotherapy drugs
- Hide from or deactivate the immune system

The immune cycle and cancer For the immune system to recognize and destroy cancer cells, several steps are needed:

1. Tumor cells (in gray) release proteins (red dots) that can be recognized by the immune system
2. Special cells in the body pick up the proteins and display them to the immune system
3. Immune cells (in blue) are activated to recognize these tumor proteins
4. T cells (activated immune cells) travel to tumors
5. T cells spread throughout the tumors
6. T cells recognize the cancer cells and latch on to them
7. The T cell and cancer cell exchange signals. If the immune system is working well, the T cell will destroy the cancer cell. But the cancer cell may send a countersignal to the T cell that deactivates it.



This diagram shows how immune cells learn to recognize and destroy cancer cells. Clinical trials are testing strategies for each step in this cycle in hopes of strengthening the body's immune system against cancer.

We are learning that there are many different connections required for a properly functioning immune system. Turn on the immune system too strongly, and it starts attacking normal cells. Turn on the immune system too weakly, and the cancer cell may find other ways to escape.

There are many ways to stimulate the immune system, and we are just starting to learn about combining different approaches and what the effects may be.

More information For more information on immunotherapy and cancer, see this related article: blog.dana-farber.org/insight/2015/06/what-is-cancer-immunotherapy.

EMBRACE program

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If you don't live near Dana-Farber, our care team can collaborate with you and your local oncologist over the course of your treatment, providing active, continuous care to help you make the most informed treatment decisions.

Eric Winer, MD, director of Breast Oncology at Dana-Farber Cancer Institute's Susan F. Smith Center for Women's Cancers, explains, "The EMBRACE program was established to meet the multi-dimensional needs of our patients with metastatic breast cancer. It provides information and support, assists with access to research studies and clinical trials, and helps Dana-Farber doctors in maintaining regular contact with referring physicians. It is all about serving our patients in the best way possible, while also advancing knowledge and new therapies."

Patient coordinators will play a key role in the EMBRACE clinical program. Melissa Hughes, senior research project manager for the program, says, "The EMBRACE coordinators will be the main point of contact for EMBRACE patients. Coordinators will introduce

patients to the supportive care and educational resources here at Dana-Farber and will help them access any of these services during treatment. Eventually, our goal is for the coordinators to also follow up with patients every couple of months to check in, ensure that test results have been received, and assist in contacting their oncologists or accessing other services, such as social work."

EMBRACE Coordinators Maggie Merrill and Rebecca Santiago say they feel they help to bridge the gap between patients, their DFCI providers, and outside oncologists, as well as among DFCI's clinical research staff and DFCI providers.

And patient feedback has already been positive. "Our patients definitely contact us often, and they are grateful that they have us as a point of contact whom they can call directly," says Maggie. "They also appreciate getting updates, such as any testing of their tumor samples and new resources. They have told us that having this communication makes them feel supported," Rebecca says.

2016 Annual Metastatic Breast Cancer Forum

People with metastatic breast cancer and their loved ones gathered in Boston at Dana-Farber on September 24, 2016, for a full day of education, support, and companionship.

Forum presentations included: Estrogen-Receptor-Positive Breast Cancer, Triple Negative Breast Cancer, HER2 Positive Breast Cancer, Treating Pain and Neuropathy, The Role of Surgery, Making New Treatment Decisions, Meditation and Mindfulness, Introduction to Tai Chi, and Genomics and Metastatic Breast Cancer.

Forum highlights are available at www.dana-farber.org/MBCforum.

The Forum was sponsored by Dana-Farber's Susan F. Smith Center for Women's Cancers and EMBRACE (Ending Metastatic Breast Cancer for Everyone).

The 2017 Metastatic Breast Cancer Forum will be Saturday, October 21, 2017. Contact us for more information: embrace@partners.org.

Resources

New webchat video: Choosing clinical trials
tinyURL.com/ChoosingClinicalTrials

With Nancy Lin, MD, clinical director of Breast Oncology at the Susan F. Smith Center for Women's Cancers and Erica Mayer, MD, MPH, senior physician

Participating in a Clinical Trial: Roles and Responsibilities

video.dfcionline.org/accordent/PanelMBCF101715

With Eric Winer, MD, director of Breast Oncology at the Susan F. Smith Center for Women's Cancers

Finding a clinical trial: Dana-Farber Cancer Institute

www.dana-farber.org/ClinicalTrials

New webcast: Cognitive dysfunction in metastatic breast cancer

video.dfcionline.org/accordent/MBCEMBRACE062016

With Fremonta Myer, MD, clinical psychiatrist in the Department of Psychosocial Oncology and Palliative Care

EMBRACE

ENDING METASTATIC BREAST CANCER FOR EVERYONE



Principal Investigator
Nancy Lin, MD

Susan F. Smith Center for Women's Cancers
Breast Oncology Center
Dana-Farber Cancer Institute
450 Brookline Avenue
Boston, MA 02215

Please send us your comments, questions, and suggestions!

Email: embrace@partners.org

Phone: 617-632-5510