bloom

ISSUE 30 JUNE 2020

REACH TO RECOVERY INTERNATIONAL

Reach to Recovery International (RRI)
RRI is committed to improving the quality of life of individuals affected by breast cancer and their families.

Table of contents

We respectfully acknowledge the Indigenous women of our global community, the traditional custodians of our environment.

REACH TO RECOVERY INTERNATIONAL

Reach to Recovery International, Inc. is a global non-profit organisation based in Baltimore, Maryland, USA.

Cover photo: © iStock.com/xubingruo

Our mission

Reach to Recovery International's mission is to:

- Unite organisations throughout the world which support individuals affected by breast cancer, including their families, in order to share ideas and best practices;
- Disseminate valuable information to support individuals affected by breast cancer throughout the world via bi-annual conferences, our website, our e-newsletter, and other forms of worldwide communications; and
- Assist our Member Organisations in achieving their goals of:
    - Improving the quality of life of individuals affected by breast cancer,
    - Providing psychosocial support to individuals affected by breast cancer, either through group meetings or activities or one-on-one peer support provided by carefully trained survivor volunteers,
    - Advocating on behalf of individuals affected by breast cancer,
    - Providing patient navigation to individuals affected by breast cancer.

What would you like to read about in the next edition of *bloom*?

Email your theme suggestions to information@reachtorecoveryinternational.org. A theme will be chosen by August 2020. Regardless of whether your suggested theme is chosen this time, it will remain under consideration for future editions.

SUBMIT YOUR ARTICLE

bloom

Bloom is published by Reach to Recovery International, Inc. For more information about RRI, go to *www.reachtorecoveryinternational.org*.

Bloom is introducing a new column!

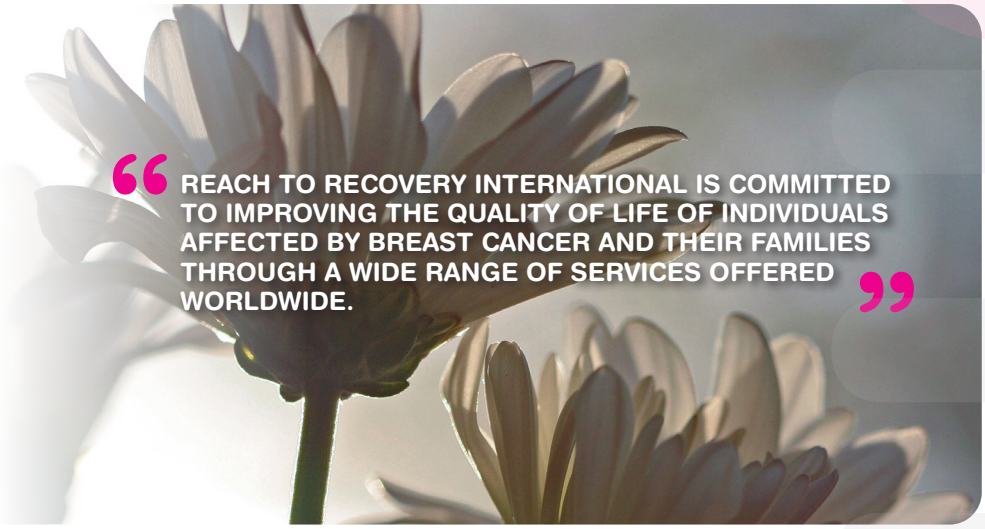
Do you know a breast cancer survivor who provides outstanding peer support for an organisation in your community? Starting with our next edition in December 2020, we will be featuring a deserving peer-support volunteer in each edition of *Bloom*. These features will also be posted permanently on www.reachtorecoveryinternational.org. Send your nomination along with a 200–400 word article about the volunteer to info@reachtorecoveryinternational.org. Please also include a high-resolution photo of your nominee. It's a great way to say thanks for a job well done, and to raise awareness about your organisation!

Upcoming events: two updates!

Please Note: **Southeast Asia Breast Cancer Symposium:**
17 – 19 July, 2020 in Jakarta, Indonesia **IS CANCELLED**.

Date Change: **20th RRI Breast Cancer Support Conference:**
Now: 8-11 September, 2021 in Guadalajara, Mexico

Photo: ID 77820314 © Kobby Dagan | Dreamstime.com



Message from Cathy Hirsch - President of RRI

Cathy Hirsch

Important Conference announcement -

All of us with Reach to Recovery International hope you and your loved ones are staying safe and well during this uncertain time. In light of the COVID-19 pandemic, Reach to Recovery International and the Local Organizing Committee in Guadalajara, Mexico have determined it safest to postpone the 20th RRI Breast Cancer Support Conference, which had been scheduled for 3 – 6 March 2021. The new dates for the Conference will be 9 – 11 September 2021, with pre-Conference workshops and a Welcome Reception to be held on 8 September. We look forward to seeing you there!

In this edition -

This edition of *Bloom* features a special section on how the pandemic is affecting our members and friends around the world. We hear from several experts about how the situation is impacting medical care for cancer patients, and we hear stories from organizations and individuals about how they are coping and helping their constituents cope. We hope their insights and tips will be helpful to you.

To remind us that there are still reasons for optimism and celebration, we have also kept our originally planned theme of *Newer treatments and therapies*. The American Cancer Society reports on what's new in breast cancer research, and we hear from the United States' National Cancer Institute about promising new treatments for HER2-positive metastatic breast cancer. Bloom Medical Contributor, Professor Cheng-Har Yip, discusses Intraoperative Radiation Therapy which can be delivered to certain qualifying patients in a single dose administered in the operating room immediately after the tumor is removed. We have an overview of the development of breast cancer treatments and therapies over the last several decades and the impact they have had on India. We also hear about genetic testing that is now being done in Pune, India.

In other news from India, we shine a spotlight on the India Cancer Society Delhi and the work it is doing to meet the needs of patients with advanced breast cancer and metastatic breast cancer. We also shine spotlights on Fiji, where breast cancer survivors recently received Outreach from a team with Abreast In A Boat, and on Greece, where the Hellenic Association of Women with Breast Cancer "Alma Zois" is filling the psychosocial needs of breast cancer patients in public hospitals.

If a silver lining can be found in the midst of the inconvenience of the pandemic, it may be that many of us are eating healthier as we self-isolate at home, avoiding grocery stores and restaurants as much as possible. Our Global Kitchen features two recipes that use ingredients you may already have in your pantry, one a warm, healthy comfort food for our readers in the southern hemisphere where winter is approaching, and the other a light, no-cook recipe for those entering the summer season in the northern hemisphere.

> "ALL OF US WITH REACH TO RECOVERY INTERNATIONAL HOPE YOU AND YOUR LOVED ONES ARE STAYING SAFE AND WELL DURING THIS UNCERTAIN TIME."

Reprinted from https://www.cancer.org/cancer/breast-cancer/about/whats-new-in-breast-cancer-research.html courtesy of www.cancer.org.

What's New in Breast Cancer Research?

American Cancer Society

Researchers around the world are working to find better ways to prevent, detect, and treat breast cancer, and to improve the quality of life of patients and survivors.

Breast cancer causes

Studies continue to uncover lifestyle factors and habits, as well as inherited genes, that affect breast cancer risk. Here are a few examples:

- Several studies are looking at the effect of exercise, weight gain or loss, and diet on risk.
- Studies on the best use of genetic testing for breast cancer mutations continue.
- Scientists are exploring how common gene variations (small changes in genes that are not as significant as mutations) may affect breast cancer risk. Gene variants typically have only a modest effect on risk, but when taken together they could possibly have a large impact.
- Possible environmental causes of breast cancer have also received more attention in recent years. While much of the science on this topic is still in its earliest stages, this is an area of active research.

Reducing breast cancer risk

Researchers continue to look for medicines that might help lower breast cancer risk, especially women who are at high risk.

- Estrogen blocking drugs are typically used to help treat breast cancer, but some might also help prevent it. Tamoxifen and raloxifene have been used for many years to prevent breast cancer. More recent studies with another class of drugs called aromatase inhibitors (exemestane and anastrozole) have shown that these drugs are also very effective in preventing breast cancer
- Other clinical trials are looking at non-hormonal drugs for breast cancer reduction. Drugs of interest include drugs for diabetes like metformin, drugs used to treat blood or bone marrow disorders, like ruxolitinib, and bexarotene, a drug that treats a specific type of T-cell lymphoma.

This type of research takes many years. It might be some time before meaningful results on any of these compounds are available.

New lab tests

Liquid biopsies

Circulating tumor cells (CTCs) and circulating tumor DNA (ctDNA)

Circulating tumor cells (CTCs) are cancer cells that break away from the tumor and move into the bloodstream. Circulating tumor DNA (ctDNA) is DNA that is released into the bloodstream when cancer cells die. Researchers are investigating tests that measure the amount of CTCs and ctDNA in the blood of women with breast cancer. Identifying and testing the CTCs and ctDNA in the blood is sometimes referred to as a "liquid biopsy." This type of biopsy may offer an easier and less expensive way to test the tumor than a traditional needle biopsy, which comes with risks such as bleeding and infection.

Some studies have shown that in women with metastatic (Stage 4) breast cancer, a high level of CTCs might predict a poorer outcome compared to women with a lower level.

Although more studies are needed before liquid biopsies could replace the traditional needle biopsy, some potential uses include:

- Looking for new gene changes (mutations) in the tumor cells that might mean the cancer has become resistant to specific treatments (like aromatase inhibitors)
- Determining if a certain drug will work on a tumor before trying it
- Helping decide if a woman's cancer is responding to a certain treatment by noticing a decline in CTC level
- Predicting if the breast cancer will recur (come back) in women with early stage breast cancer

New imaging tests

Newer types of tests are being developed for breast imaging. Some of these are already being used in certain situations, while others are still being studied.It will take time to see if they are as good as or better than those used today. Some of these tests include:

- Scintimammography (molecular breast imaging)
- Positron emission mammography (PEM)
- Electrical impedance imaging (EIT)
- Elastography
- New types of optical imaging tests

For more on these tests, see Newer and Experimental Breast Imaging Tests.

Breast cancer treatment

Chemotherapy

It is known that chemotherapy can be helpful for many breast cancer patients. But predicting who will benefit the most or the least is still being studied. Sometimes there are significant side effects (long- and short-term) from chemotherapy, so having tests that can determine who really needs chemo would be useful. Many studies are being done to evaluate different tests that can more accurately tell which patients would benefit from chemo and which patients could avoid it.

Triple-negative breast cancer

Since triple-negative breast cancers (TNBC) cannot be treated with hormone therapy or targeted therapy such as HER2 drugs, the treatment options are limited to chemotherapy. And although TNBC tends to respond well to initial chemotherapy, it tends to come back (recur) more frequently than other breast cancers.

In 2019, the immunotherapy drug Atezolizumab (Tecentriq), was approved along with the chemotherapy drug nab-paclitaxel (Abraxane) for use in women with advanced triple negative breast cancer that makes the PD-L1 protein. Other potential targets for new breast cancer drugs have been identified in recent years. Drugs based on these targets, such as kinase inhibitors, are now being studied to treat triple-negative breast cancers, either by themselves, or in combination with chemotherapy. One

example is the AKT inhibitor ipatasertib, which, when used with paclitaxel, shows promising results in treating women with TNBC as the first treatment. Another AKT inhibitor, capivasertib, is also showing encouraging results when given with paclitaxel.

Androgen receptor inhibitors

Breast cancer cells are routinely tested for estrogen and progesterone receptors to help determine treatment options. About 60% of breast cancer cells also have receptors for androgens (male hormones). Initial studies in women with breast cancer show some response when using the antiandrogen bicalutamide, to treat TNBC that has the androgen receptor. Bicalutamide is a drug that has been used to treat prostate cancer for many years. More studies in breast cancer are ongoing.

Supportive care

There are trials looking at different medicines to try and improve memory and brain symptoms after chemotherapy. Other studies are evaluating if certain cardiac drugs, known as beta-blockers, can prevent the heart damage sometimes caused by common breast cancer drugs such as doxorubicin and trastuzumab.

Thinking about taking part in a clinical trial

Clinical trials are carefully controlled research studies that are done to get a closer look at promising new treatments or procedures. Clinical trials are one way to get state-of-the art cancer treatment. In some cases, they may be the only way to get access to newer treatments. They are also the best way for doctors to learn better methods to treat cancer. Still, they are not right for everyone.

If you would like to learn more about clinical trials that might be right for you, start by asking your doctor if your clinic or hospital conducts clinical trials, or see Clinical Trials to learn more.

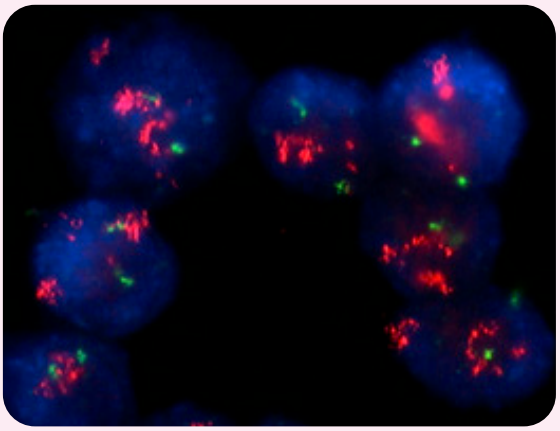
REFERENCES:

1. American Joint Committee on Cancer. Breast. In: AJCC Cancer Staging Manual. 8th ed. New York, NY: Springer; 2017:589.
2. Cristofanilli M, Pierga JY, Reuben J, Rademaker A, Davis AA, Peeters DJ et al. The clinical use of circulating tumor cells (CTCs) enumeration for staging of metastatic breast cancer (MBC): International expert consensus paper. Crit Rev Oncol Hematol. 2019 Feb;134:39-45.
3. Cuzick, J et al. Anastrozole for prevention of breast cancer in high-risk postmenopausal women (IBIS-II): an international, double-blind, randomised placebo-controlled trial. The Lancet. 2014;383 (9922):1041 - 1048.
4. Goss, P.E., et al., Exemestane for Breast-Cancer Prevention in Postmenopausal Women. New England Journal of Medicine, 2011. 364(25): p. 2381-2391.
5. Greene LR, Wilkinson D. The role of general nuclear medicine in breast cancer. J Med Radiat Sci. 2015;62(1):54-65.
6. Henry NL, Bedard PL, and DeMichele A. Standard and Genomic Tools for Decision Support in Breast Cancer Treatment. In Dizon DS, Pennel N, Rugo HS, Pickell LF, eds. 2017 American Society of Clinical Oncology Educational Book. 53rd Annual Meeting. 2017.
7. Ignatiadis M, Lee M, and Jeffrey SS. Circulating Tumor Cells and Circulating Tumor DNA: Challenges and Opportunities on the Path to Clinical Utility. Clin Cancer Res; 21(21); 4786–800.
8. Jhan JR, Andrechek ER. Triple-negative breast cancer and the potential for targeted therapy. Pharmacogenomics. 2017;18(17):1595–1609. doi:10.2217/pgs-2017-0117.
9. Litton JK, Burstein HJ, Turner NC. Molecular Testing in Breast Cancer. Am Soc Clin Oncol Educ Book. 2019 Jan;39:e1-e7. doi: 10.1200/EDBK_237715. Epub 2019 May 17.
10. Mayer IA, Dent R, Tan T, et al. Novel Targeted Agents and Immunotherapy in Breast Cancer. In Dizon DS, Pennel N, Rugo HS, Pickell LF, eds. 2017 American Society of Clinical Oncology Educational Book. 53rd Annual Meeting. 2017.
11. National Cancer Institute. https://www.cancer.gov/about-cancer/treatment/clinical-trials/search. Bexarotene in Preventing Breast Cancer in Patients at High Risk for Breast Cancer. Accessed August 15, 2019.
12. National Cancer Institute. https://www.cancer.gov/about-cancer/treatment/clinical-trials/search. Donepezil Hydrochloride in Improving Memory Performance in Breast Cancer Survivors after Chemotherapy. Accessed August 15, 2019.
13. National Cancer Institute. https://www.cancer.gov/about-cancer/treatment/clinical-trials/search. Metformin Hydrochloride in Preventing Breast Cancer in Patients with Atypical Hyperplasia or In Situ Breast Cancer. Accessed August 15, 2019.
14. National Cancer Institute. https://www.cancer.gov/about-cancer/treatment/clinical-trials/search. Ruxolitinib in Preventing Breast Cancer in Patients with High Risk and Precancerous Breast Lesions. Accessed August 15, 2019.
15. National Cancer Institute. https://www.cancer.gov/about-cancer/treatment/clinical-trials/search. Testing the Addition of a Blood Pressure Medication, Carvedilol, to HER-2 Targeted Therapy for Metastatic Breast Cancer to Prevent Cardiac Toxicity. Accessed August 15, 2019.
16. Rossi G, Mu Z, Rademaker AW, Austin LK, Strickland KS, Costa RLB et al. Cell-Free DNA and Circulating Tumor Cells: Comprehensive Liquid Biopsy Analysis in Advanced Breast Cancer. Clin Cancer Res. 2018 Feb 1;24(3):560-568.
17. Savard MF, Khan O, Hunt KK, Verma S. Redrawing the Lines: The Next Generation of Treatment in Metastatic Breast Cancer. Am Soc Clin Oncol Educ Book. 2019 Jan;39:e8-e21.
18. Solin LJ, Gray R, Baehner FL, et al. A multigene expression assay to predict local recurrence risk for ductal carcinoma in situ of the breast. J Natl Cancer Inst. 2013;105:701-710.
19. Yu M, Bardia A, Aceto N et al. Ex vivo culture of circulating breast tumor cells for individualized testing of drug susceptibility. Science. 2014 Jul 11; 345(6193): 216–220.

Reprinted from https://www.cancer.gov/news-events/cancer-currents-blog/2020/tucatinib-trastuzumab-deruxtecan-her2-positive-metastatic-breast-cancer courtesy of NCI.

For Metastatic HER2-Positive Breast Cancer, New Treatments Emerge

NCI Staff



Breast cancer cells with strong HER2 amplification (red) that have spread to the lymph nodes. Credit: World J Surg Oncol. November 2011. doi: 10.1186/1477-7819-9-146. CC BY 2.0.

UPDATE: On April 17, 2020, the Food and Drug Administration (FDA) approved tucatinib (Tukysa) to treat people with HER2-positive advanced breast cancer. The drug is approved for use in combination with trastuzumab (Herceptin) and capecitabine (Xeloda) by patients whose cancer cannot be removed surgically or has spread to other parts of the body (metastasized) and who have undergone at least one prior line of treatment.

The approval applies to patients whose cancer has spread to the brain, which occurs in more than 25% of people with metastatic HER2-positive breast cancer and is typically very difficult to treat.

"The clinical trial supporting this approval enrolled and specifically studied patients with active brain metastases," Richard Pazdur, M.D., director of the FDA's Oncology Center of Excellence, said in a statement.

The clinical trial leading to tucatinib's approval, called HER2CLIMB, is described in the post below.

Two new treatment options are emerging for women with metastatic breast cancer, following positive results from clinical trials. The trials tested the drugs tucatinib and trastuzumab deruxtecan (Enhertu) in women who had been previously treated for metastatic breast cancer that overproduces the HER2 protein, known as HER2-positive breast cancer.

In one of the trials, called HER2CLIMB, women treated with tucatinib in addition to trastuzumab (Herceptin) and capecitabine lived longer both without their disease progressing and overall than women who received only trastuzumab and capecitabine (Xeloda). The treatment also benefited women in the trial whose cancer had spread to the brain, a particularly challenging group to treat.

Trastuzumab deruxtecan was tested in a smaller trial, called DESTINY-Breast01, and wasn't compared directly with another treatment. But many women in the study who received the drug saw their tumors shrink and lived for an extended period without their cancer getting worse.

Based on the DESTINY-Breast01 results, in fact, on December 20, the Food and Drug Administration (FDA) announced an accelerated approval for trastuzumab deruxtecan as a treatment for women with previously treated HER2-positive breast cancer. Under an accelerated approval, the drug's manufacturer, Daiichi Sankyo, and AstraZeneca, with which it has a global commercialization agreement, must conduct further studies of trastuzumab deruxtecan to confirm that it benefits patients.

Results from both clinical trials were presented in early December at the 2019 San Antonio Breast Cancer Symposium (SABCS) and published simultaneously in the *New England Journal of Medicine*.

Both drugs also can have significant side effects, the trials showed. In particular, trastuzumab deruxtecan caused lung-related side effects that led to several deaths. That finding led the study's leaders to stress that clinicians need to watch carefully for lung disease in women who receive the drug and take the appropriate measures to manage it.

FDA's approval of trastuzumab deruxtecan included a special warning for clinicians on the risk of the lung-related side effects, known as interstitial lung disease (ILD).

In both trials, women whose cancers had spread to the brain were eligible to participate. That's important, explained Jesus Anampa, M.D., who specializes in the treatment of breast cancer at the Montefiore Medical Center in New York. Breast cancer clinical trials often exclude women whose cancer has spread to the brain, but more than 25% of women with metastatic HER2-positive breast cancer will develop brain metastases, Dr. Anampa said.

In particular, the findings with tucatinib in women with brain metastases "are really impressive," he said. "The results are very exciting."

Different Drugs, Same Target

Breast cancers that are HER2-positive tend to be aggressive, with the excess HER2 protein on tumor cells fueling the cancer's growth. In the late 1990s, trastuzumab was among the first targeted cancer therapies to be approved by FDA, after trials showed it could improve survival in women with metastatic HER2-positive breast cancer.

Over time, other HER2-targeted therapies emerged, some with alternative mechanisms for disrupting HER2 activity in cancer cells. Drugs like trastuzumab and pertuzumab (Perjeta) are monoclonal antibodies that bind to the HER2 protein above the cancer cell's surface, preventing it from acting or enlisting the immune system to help destroy cells that produce it.

Tucatinib, on the other hand, is a member of a class of drugs known as tyrosine kinase inhibitors (TKIs). These drugs work by binding to the part of the HER2 protein that is inside the cell and preventing it from sending signals that promote cell growth. Other HER2-targeted TKIs include neratinib (Nerlynx) and lapatinib (Tykerb).

Some TKIs have multiple targets. But, compared with other HER2-targeted drugs, tucatinib appears to be relatively selective for HER2—that is, it's less likely to bind to related proteins, explained Stanley Lipkowitz, M.D., Ph.D., chief of the Women's Malignancies Branch in NCI's Center for Cancer Research.

That selectivity limits the risk of side effects seen with other HER2-targeted TKIs that inhibit other targets, Dr. Lipkowitz said.

Trastuzumab deruxtecan, meanwhile, is one of a class of drugs called antibody-drug conjugates (ADCs), which consist of a monoclonal antibody chemically linked to a cell-killing drug. Another ADC, trastuzumab emtansine (Kadcyla), or T-DM1, is already a standard treatment for metastatic HER2-positive breast cancer.

With ADCs, the antibody component serves as a homing device, guiding the linked drug to cancer cells. Once there, the ADC is shuttled inside the cell and the attached payload—in this case, the chemotherapy drug deruxtecan—is released, explained Ian Krop, M.D., of Dana-Farber Cancer Institute, who led the DESTINY-Breast01 trial.

Deruxtecan is a type of chemotherapy drug called a topoisomerase I inhibitor, Dr. Krop said during an SABCS press briefing, but it is far more potent than other topoisomerase I inhibitors. And because deruxtecan is "membrane permeable," he said, it can then leave the target cancer cell and kill nearby cancer cells, "regardless of their HER2 expression."

Women in both the HER2CLIMB and DESTINY-Breast01 trials already had to have gone through at least two prior lines of treatment and all had received other HER2-targeted drugs, including trastuzumab, pertuzumab, and T-DM1, as part of those earlier treatments.

As such, both tucatinib and trastuzumab deruxtecan could meet an important need, Dr. Lipkowitz said, because there is no proven third-line treatment for metastatic HER2-positive breast cancer.

Tucatinib Improves Progression-Free Survival

Tucatinib was tested in the larger of the two trials. More than 600 participants were randomly assigned to receive either a commonly used third-line treatment regimen, the chemotherapy drug capecitabine and trastuzumab, along with a placebo, or treatment with the capecitabine–trastuzumab duo and tucatinib.

Women in the tucatinib group lived a little more than 2 months longer without their cancer getting worse (median of 7.8 months versus 5.6 months), an outcome known as progression-free survival, than women in the capecitabine–trastuzumab alone group.

In addition, nearly twice as many women in the tucatinib group saw their tumors shrink following treatment: 41% versus 23%. At 2 years after beginning treatment, approximately 45% of women in the tucatinib group were still alive, compared with approximately 27% in the other treatment group.

In women whose cancer had spread to the brain, which accounted for about 45% of trial participants, approximately 25% were still alive without their disease progressing 1 year after beginning treatment, compared with 0% in the other treatment group.

The trial's overall findings "are unprecedented for late-line therapy in advanced breast cancer," said its lead investigator, Rashmi Murthy, M.D., of the University of Texas MD Anderson Cancer Center, in a press release.

Zeina Nahleh, M.D., director of the Cleveland Clinic Florida's Maroone Cancer Center, agreed. Increasing survival in patients who have already received so many prior treatments "is a big achievement," Dr. Nahleh said.

Several side effects were more common in women in the tucatinib group, including diarrhea, vomiting, and fatigue. Severe diarrhea was also more frequent in women treated with tucatinib. Even so, less than 6% of patients in the tucatinib group stopped treatment because of side effects.

On December 23, Seattle Genetics, which manufactures tucatinib and funded the HER2CLIMB trial, announced that it had submitted its application to FDA for approval of the drug.

High Tumor Responses with Trastuzumab Deruxtecan

The DESTINY-Breast01 trial was not a randomized study, so all patients in the trial received trastuzumab deruxtecan.

Nearly all of the more than 180 women in the trial had at least some reduction in the size of their tumors, with 61% experiencing substantial reductions, Dr. Krop reported. Several patients had no evidence of cancer following treatment, known as a complete response. The median progression-free survival was more than 16 months.

Dr. Krop called the results "compelling," noting that the tumor response rate is "roughly double or triple what we typically see in other studies of this third- or later-line [patient] population."

Most of the treatment-related side effects seen in the trial were mild, Dr. Krop said. Even so, 15% of the participants stopped taking the drug because of side effects. Nearly all of these women were those who experienced ILD. Four of the women who developed ILD died as a result.

"Why we have this particular risk is unclear," he said. "And clearly we need to do more … research to identify those patients who are at risk of getting the most severe cases of ILD and [learn] how to mitigate the risk."

For future studies of the drug, Dr. Krop said, clinicians will be advised to carefully monitor patients for any evidence or symptoms of ILD and, if they suspect it has developed, to immediately stop the drug and treat the patient with steroids.

Oncologists have become more comfortable dealing with lung-related side effects, Dr. Anampa said, particularly with the emergence of immunotherapies, several of which can also cause lung inflammation.

"We definitely have to be cautious," he continued. "But I don't think [ILD] is a major barrier to moving this drug forward."

FDA's approval of trastuzumab deruxtecan came approximately 2 months after AstraZeneca had filed its approval application. The agency had granted the application a "priority review," which is used to expedite the assessment of drugs it believes have the potential to be a significant improvement for the treatment of life-threatening conditions.

Looking Ahead

It will take time to see how these drugs will affect patients, Dr. Nahleh acknowledged.

"But it's a great opportunity to offer patients some options they currently don't have," she said.

Based on the HER2CLIMB results, Dr. Murthy believes that tucatinib, in combination with trastuzumab and capecitabine, "should be the new standard of care" for women with HER2-positive metastatic breast cancer who have gone through multiple lines of treatment.

Dr. Nahleh agreed, noting that, once approved, tucatinib would likely be the drug she would turn to in this group of patients.

As for trastuzumab deruxtecan, Dr. Lipkowitz called it "a very exciting and promising agent." Since both drugs (tucatinib and trastuzumab-deruxtecan) were given to similar patient groups, he said, it remains to be determined which patients are the best candidates for each drug.

The results of several ongoing phase 3 clinical trials of this drug will help oncologists better understand how trastuzumab deruxtecan should be used in clinical practice, he continued.

Of particular interest, he continued, is an ongoing study testing the drug in patients who have "HER2-low" cancer—that is, their tumors don't express enough HER2 for them to be considered suitable candidates for HER2-targeted therapy using standard criteria.

Early results from this study showed that approximately 45% of women in the trial had a tumor response to the drug.

FDA's Trodelvy Approval a `Big Win' for Patients with Metastatic Triple-Negative Breast Cancer

Ryan McDonald, *CURE*®

The Food and Drug Administration's recent approval of the first antibody-drug conjugate to treat patients with pretreated metastatic triple-negative breast cancer is a major milestone, according to one expert.

The Food and Drug Administration's (FDA) recent approval of the first antibody-drug conjugate to treat patients with pretreated metastatic triple-negative breast cancer (TNBC) is a major milestone, according to Dr. Aditya Bardia.

"(Trodelvy [sacituzumab govitecan-hziy]) received breakthrough designation status and received accelerated approval, which by definition tells you that it addresses a serious condition and potentially provided meaningful therapeutic benefit over existing treatments," Bardia, a breast medical oncologist at Massachusetts General Hospital Cancer Center, said in an interview with *CURE*®.

The approval was made under the FDA's Accelerated Approval Program based on results from a single-arm, multicenter phase 2 study. Continued approval may depend upon verification of clinical benefit in the confirmatory phase 3 ASCENT study, which was recently stopped early due to very promising results to review.

In the phase 2 study, Trodelvy demonstrated an objective response rate — the proportion of patients with tumor size reduction of a predefined amount— of 33.3% and a median duration of response of 7.7 months in 108 adult patients with TNBC who had previously received a median of three prior systemic therapies in the metastatic setting.

"This therapy is what we call a 'smart bomb', i.e. (a) targeted way of delivering the bomb precisely to the area that you'd want, said Bardia, the study's lead investigator. "The drug has an antibody linked to a toxic payload, and thus allows a targeted way of delivering high doses of toxic therapy selectively to the cancer cells."

Single-Arm Trial

Bardia acknowledged that because this was a single-arm study, and not a randomized trial, there is a lack of head-to-head comparisons with Trodelvy vs. chemotherapy. However, when looking at historical data in the setting, the response to standard chemotherapy has typically been between 5% to 10%, while progression-free survival is in the range of two to three months.

"While this was not a randomized trial the efficacy with this drug was approximately double of what you would expect with standard chemotherapy, based on historical data," Bardia said.

Black Box Warning

The two most common side effects associated with the drug were diarrhea and neutropenia, which is a drop in the number of neutrophils in the blood that can lead to infection. As a result of the severe cases of diarrhea and neutropenia, Trodelvy carries a black box warning, indicating a serious safety risk.

"It is important that if the drug is used, that the side effects are managed appropriately," Bardia said. "What you don't want is to use an efficacious agent but have to discontinue it early because of inadequate management of side effects. Early recognition and prompt management of neutropenia and diarrhea, both of which can be managed with growth factor support and anti-diarrheal medications, would be very important to ensure that the patients can derive maximum benefit from this agent."

Bardia mentioned that most oncologists are generally comfortable with managing neutropenia and diarrhea as they are commonly encountered when treating patients. If patients are experiencing these, or any, side effects while receiving this treatment, Bardia recommended they contact their oncologist immediately to prevent things from getting worse.

Major Milestone

This approval represents a big win for patients in the management of triple negative breast cancer, according to Bardia. However, he concluded by saying more needs to be done to continue to build on the progress.

"There's a lot more that needs to be done," he said. "The response rate with this agent was 33%, but we need responses that go to 50, 70, and 80%. Hopefully we can significantly build on the progress and accelerate the efforts to fight this disease."

Intraoperative radiotherapy after lumpectomy–a new option for women with early breast cancer

Cheng-Har Yip, *Emeritus Professor, Department of Surgery, University of Malaya, Kuala Lumpur Malaysia.*
Consultant Breast Surgeon, Ramsay Sime Darby Healthcare, Malaysia
Council Member, Breast Cancer Welfare Association, Malaysia

Cheng-Har Yip

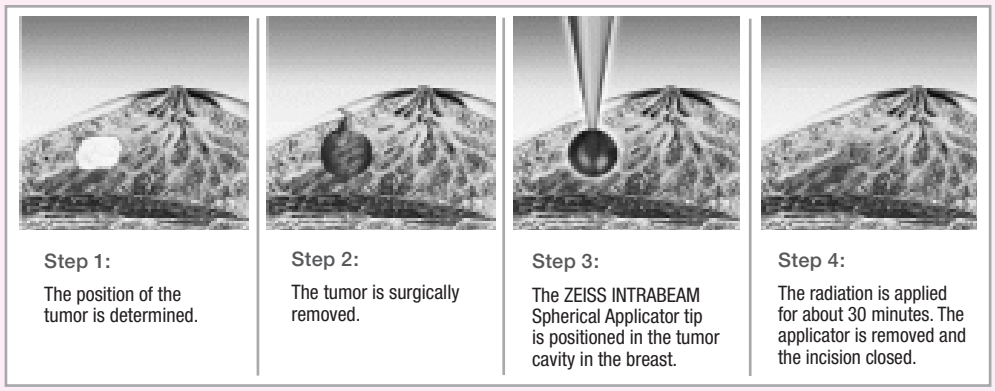


Fig. 1: Intraoperative radiotherapy

Surgery is usually the initial treatment for early breast cancer. There are two surgery options – mastectomy (removal of the whole breast) or lumpectomy (removal of the tumour with a normal margin of tissue around it) together with some form of axillary surgery to determine if there is any spread of breast cancer to the axillary lymph nodes. Mastectomy is disfiguring, although immediate reconstruction is available to restore body image. Lumpectomy requires post-operative external beam radiotherapy (EBRT), delivered with a linear accelerator. The standard of care is to deliver about 15 to 25 sessions of whole breast irradiation (WBI), over 3 to 5 weeks, followed by a 5-8 day boost to the tumour bed, which is marked by surgical clips in the tumour bed. Each session lasts about 5 minutes. The scar will also indicate the position of the tumour bed.

Sometimes patients who are suitable for lumpectomy are forced to have a mastectomy when they are unable to travel daily for just 5 minutes of radiotherapy for 4 to 6 weeks because they live far away from a cancer centre with radiotherapy facilities. An option for such patients would be the use of intraoperative radiotherapy (IORT) during surgery itself. That is, after the lump is removed, radiotherapy is applied via an applicator in the cavity for an average of 30 minutes, after which the applicator is removed and the wound is closed in the usual manner. (Fig. 1)

However, only certain patients are suitable for the single session of IORT, and these are patients with the following good prognostic factors: age over 45 years old, tumour size less than 3 cm, ER positive, HER2 negative, non-Grade 3, and node negative. Women who do not have any of these factors are still suitable for IORT, except that IORT is used as a boost to the tumour bed, followed by 15 sessions of EBRT over a three-week period. Using IORT as a boost is currently being investigated as a Randomized Control Trial (RCT), although retrospective studies have shown that IORT as a boost is as good as EBRT followed by a boost.

Currently there are two machines that are used for IORT in breast cancer – the Intrabeam machine (Fig. 2) and the Mobetron (Fig. 3). RCTs have been carried out using these two machines to compare IORT with the conventional 4-6 weeks of EBRT, and these RCTs show similar survival outcomes between the two methods of delivering radiation therapy, with similar rates of local recurrence. The advantage of IORT is that it minimizes radiation exposure to healthy tissue and organs. Cosmetic outcomes are also similar between the two groups.

IORT is ideal in situations where the cancer centre with radiation facilities are far from the patients' residence. Since the one session of radiotherapy can replace 4-6 weeks of EBRT, it is also cheaper. Unfortunately it is only available in some centres. Although theoretically it would be of advantage in low-resource settings where access to radiotherapy is a problem, IORT still requires specialised manpower, ie. a radiation oncologist and a physicist.

While IORT may seem like a good idea, it is not suitable for every patient, and patients will need to discuss with their surgeon what is the best option for them.

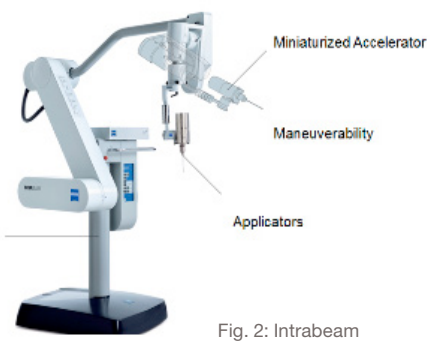


Fig. 2: Intrabeam

Fig. 3: Mobetron

An overview of the development of breast cancer treatments and therapies and their impact on India

Rama Sivaram

Rama Sivaram, *Consultant - KEM Hospital Research Centre; Advisor on Advocacy and Rehab - Nag Foundation*

Goals of care and perceptions of new treatment

The main goal of cancer treatment is to extend survival and eradicate the cancer when possible. In cases of advanced or metastatic breast cancer (ABC/MBC), the goal is to extend survival and maintain quality of life. This divides women into those who live in remission and those who have advanced or recurrent disease. For those who have no evidence of breast cancer after treatment, they may not need to — or prefer not to — think about new treatments. However, those with ABC/MBC often cling to new advances as beacons of hope. From the perspective of a clinician, newer treatments and therapies may extend survival with optimal quality of life and minimal toxicities, but are often to be approached with caution. In contrast, pharmaceutical companies and media often make splashing headlines touting new treatments as steps towards "a cure".

Progress in treatments and cure

As an educator and advocate, newer treatments suggest improvement upon previous therapies. They may reflect novel approaches including: combinations or additions of another agent, addition of a subsequent or third line of therapy (when the first and second no longer work), change of protocols of agents, and change in timing, scheduling, routes of administration, or toxicity profile. Both researchers and clinicians know that progress is incremental, and that the aim is to offer a drug that offers improved survival, enhanced quality of life and a favourable (or lessened) toxicity profile.

Current state of breast cancer treatment in India

In India, we struggle to obtain archival data, and our retrospective studies have some gaps. I often rely on anecdotal information and internet resources to learn more about advances in breast cancer.

A personal journey with breast cancer

My link to breast cancer dates back to my maternal aunt who self-detected her tumour in 1970. She was referred to India's second cancer hospital, Adayar Cancer Institute, which was built in 1954. She received a radical mastectomy, followed by a chemotherapy regimen of cyclophosphamide and methotrexate (with the addition of fluorouracil) and radiation with Cobalt-60. She lived 13 years after her initial breast cancer diagnosis.

At that time, breast cancer was not at the forefront of public awareness. Although the institute where my aunt was treated had installed a mammography unit in 1965, there was no routine screening. However, pathology services and biopsies were able to be performed. Whether due to lack of communication or ability to perform histopathology, my aunt did not know which subtype of breast cancer she had. With the National Cancer Control Programme (NCCP) initiated in 1975-1976 in India, the scope of services expanded and there were better oncological laboratory facilities. The mainstay of cancer treatment was prompt surgery, chemotherapy, and radiation therapy.

Retrospective studies between 1965 and 1985 in India demonstrate a 50% increase in the incidence of breast cancer. There were no screening programs or breast health awareness campaigns, and there was limited pre-operative imaging for better surgical excision management. Although no research was being conducted in India, research and clinical trials in the west were booming. In fact, the period between my aunt's cancer and my own cancer included several landmarks discoveries including:

- 1967 – The discovery of estrogen receptors by Elwood Jensen (USA). Jensen developed tests to detect the presence of estrogen receptors in breast cancer cells. By the 1980s, this was part of the standard of care.
- 1970 – The invention of low dose film screen mammography offered a diagnostic opportunity to women who accidentally found a lump or had one found during a clinical examination by a doctor or midwife nurse.
- 1971 – The compound Paclitaxel was first isolated in the Pacific Yew (a type of tree). The Federal Drug Administration (FDA) in the USA approved Paclitaxel for medical use in 1993.
- 1978 – Tamoxifen, which was part of a new class of drugs called selective estrogen receptor modulators (SERMs), was approved by the FDA for breast cancer treatment. In 1990, the FDA approved Tamoxifen for prophylactic use.
- 1980s – Clinical trials in the 70's paved the way for breast conservation surgery/ lumpectomy. In 1985, studies showed that this procedure with radiation had similar survival rates to those treated with mastectomy only. Tumour biology and behaviour could guide the extent of surgery.
- 1984 – The HER2 gene was discovered by Dennis Slamon. Overexpression of HER2 was linked to aggressive breast cancer that was not responsive to treatments until Genentech patented Herceptin, which received FDA approval for HER2-positive, node-positive breast cancer in 2006.
- 1990s
  - –Donald Morton and Alistair Cochran pioneered the Sentinel Node Biopsy (SNB). This helped guide what type of surgery should be performed, and influenced outcomes such as cosmesis and lymphedema.
  - –Anthracycline-based regimens became the mainstay of adjuvant chemotherapy for early breast cancer since then. Additionally, adding a taxane to this regimen showed further benefit in the treatment of early-stage breast cancer.
- 1994 – Marie-Claire King, a professor of genetics and epidemiology, identified the first breast cancer genes (BRCA1 and BRCA2).
- 1996 – Tests for BRCA1 and BRCA2 became available.
- 1995 – Anastrozole, which had been patented by Imperial Chemicals in 1987, was approved by the FDA as a hormone therapy to block estrogen in postmenopausal women.

New treatments in India

My tryst with breast cancer began in 2004. My mammogram, biopsy (performed by fine needle aspiration), and breast ultrasound

revealed an early stage triple-negative breast cancer. Thus, I received optimal treatment including:

- Lumpectomy and axillary lymph node dissection
- Adjuvant chemotherapy with pre-chemotherapy medications (steroids, proton pump inhibitors, and anti-nausea medication) and post-chemotherapy medications (anti-nausea medication and mouth washes)
- Routine monitoring for toxicity
- Standard external beam radiation (on a LINAC 3) and brachytherapy (with iridium-92)

Fortunately, most advances had come to India by this time. Most advances in treatment were offered primarily through clinical trials as a part of the drug development process. Given the growing burden of cancers in developing countries and economic viability, newer therapies became more available in India. The opportunity for multinational participation in trials, need for greater patients for recruitment, lower costs to sponsors, and standards for clinical trial regulations promoted these opportunities in developing countries. However, utilizing newer and optimal treatments necessitates institutional and physician competency, as well as patient assessment of the protocol and cost.

My own breast cancer experience and work in counselling and education has spread greater knowledge amongst many breast cancer patients in India. Those with breast cancer and their caregivers often contact me about costs of new drugs, generics, and prognosis. For instance, some newer milestones in breast cancer include:

- 2006 – The FDA approved Trastuzumab (Herceptin) for HER2-positive breast cancer. Today, we have clinical trials using combination therapy (e.g. lapatinib and trastuzumab) for progressive disease and novel antibody treatments (e.g. pertuzumab, T-DM1) for metastatic disease.
- 2010's – Genetic testing became more available and affordable, especially for BRCA1 and BRCA2. PARP inhibitors, a type of targeted therapy that inhibit the poly-ADP ribose polymerase (PARP) protein from helping damaged cancer cells repair themselves, were introduced for patients with BRCA1 and BRCA2 mutations. Neoadjuvant systemic and radiation therapies could spare axillary dissection and impact outcomes (like cosmesis and lymphedema). We have progressed from 2-D to 3-D radiation therapy.

As progress in research accelerates, we gain greater understanding of tumour biology, computer modelling, 3D imaging, molecular docking (the finding best match between molecules to discover new drugs), reconstructive and oncoplastic surgery, biologic or immune therapies, partial breast radiation and proton therapy. India also has commercial start-ups in OncotypeDX, which is a genomic test (on the tumour specimen) to assess treatment response. Furthermore, greater use of tumour biology has helped to guide de-escalation of treatment (not offering chemotherapy to women with very low risk of recurrence or in those who many not benefit from chemotherapy). Lastly, some of the testing and therapies remain controversial with respect to costs incurred by patients and efficacy of testing.

The future of breast cancer treatment in India

While India is a low-middle income country with a low Gross Domestic Product and limited spending in research, cancer care in India has managed to update breast cancer treatment. There are identifiable barriers to optimizing care for all individuals with breast cancer, such as cost of care, lack of oncologists for the large population, regulatory issues, and variable training of doctors. Unfortunately, there are still many diagnoses of ABC/MBC in India. As pharmaceutical companies establish in India, there is greater opportunity to participate in multicenter trials, as well as for exploitation. Overall, various components of patient-centered breast cancer therapy are moving forward in India. Every decade, we rejoice in the many treatment advances, as well as the steps to improve quality of life.

Thoughts from the author...

Breast Cancer - what new treatments?
Whither to?
Some shying away, without a care,
but a few
Survivors voicing, *Don't know and don't want to know*
Relieved treatment was over, quite some time ago
Voices of recurrence and Mets whispering,
We know
New treatment is hope to help us watch our children grow.

She said, *I live in hope renewing itself*
As newer treatment stretching time
I long for time to stop, for I fear
To hear extend survival from 4 to 7
Numbers I dread, they are statistics
Sister, I take this journey for you
I am both hope and despair
I am half woman and half faith
For one day the world will know
Only my passing Dante's doors
A cure will be found
Remember me as a part of that cure.

REFERENCES:

1. Genomic Tests for cancer Split Oncologists https://economictimes.indiatimes.com/industry/healthcare/biotech/healthcare/genomic-tests-for-cancer-split-oncologists/articleshow/64756787.cms?from=mdr
2. BRCA1 &BRCA2 in Indian Breast Cancer Patients (Saxena et al).' Hum Mutat.2002 Dec;20(6):473-4.
3. Endpoints in advanced breast cancer: methodological aspects & clinical implications Everardo D. Saad Indian J Med Res. 2011 Oct; 134(4): 413–418., PMCID: PMC3237237; PMID: 22089601
4. http://www.stopbreastcancer.org/breast-cancer-information/understanding-research/outcome-measures-or-endpoints.html Outcome Measures or Endpoints for Clinical Trials
5. https://www.ascopost.com/issues/january-25-2019/challenge-moving-forward-in-breast-cancer-treatment/ Challenge Moving Forward in Breast Cancer Treatment: To Show That New Approaches Change Outcomes
6. https://www.cancer.gov/news-events/cancer-currents-blog/2020/tucatinib-trastuzumab-deruxtecan-her2-positive-metastatic-breast-cancer NCI. January 8, 2020, by NCI Staff
7. Clinical trials.gov
8. FDA Approves Trastuzumab and Hyaluronidase-oysk for Subcutaneous Injection in Certain HER2-Positive Breast Cancers-The ASCO Post3/1/2019
9. https://www.breastcancertrials.org/BCTIncludes/index.html;jsessionid=hGdNgCQQLhC_gO_pCBZ4QYbXF928_PpLqiiP3R93.ip-10-20-50-17
10. https://www.cancer.gov/about-cancer/treatment/clinical-trials/disease/breast-cancer/treatment
11. https://www.cancer.net/cancer-types/breast-cancer/about-clinical-trials
12. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4991144/ South Asian J Cancer. 2016 Jul-Sep; 5(3): 86–92. doi: 10.4103/2278-330X.187561 Breast cancer: An overview of published Indian data
13. Bharath Rangarajan, Tanuja Shet,[1] Tabassum Wadasadawala,[2] Nita S. Nair,[3] R. Madhu Sairam,[4] Sachin S. Hingmire,[5] and Jyoti Bajpai[6]

Genetic testing at Prashanti Cancer Care Mission

Laleh Busheri

Laleh Busheri
Pune, India

Some women inherit changes in certain genes that increase their risk of developing breast cancer. In addition to inherited mutations, there are certain mutations that are spontaneous which are induced by environmental factors like ultraviolent radiation and carcinogens. These changes in the genes can now be detected by different DNA sequencing techniques. The two most important genes associated with breast cancer are BRCA1 and BRCA2. The most common condition associated with these mutations is called Hereditary Breast and Ovarian Cancer (HBOC). It includes breast cancer, ovarian cancer, pancreatic cancer and prostate cancer. Almost 5-6% of breast cancers are known to be hereditary and are caused due to a pathogenic mutation in BRCA1 and BRCA2.

HBOC genetic testing has now become mainstream in breast cancer management. In 2017, Prashanti Cancer Care Mission (PCCM) established a genetic clinic which offers counseling, genetic testing, and medical advice meeting international standards. The purpose is to identify these mutations and the association with disease etiology and physiology. This is perhaps India's only genetic clinic which works in tandem with breast oncoplastic surgeons to offer risk-reducing surgeries for BRCA-positive high-risk cancer patients. Starting with awareness talks and screening camps, we aim to provide the best care and treatment to the patient. With the most advanced radiological screening techniques to breast conservation oncoplastic surgeries, the patients are counselled for the best possible outcome. The genetic clinic headed by Dr. Santosh Dixit aims to recognize the potential candidates for genetic testing in consensus with the National Comprehensive Cancer Network guidelines. The newly diagnosed patient is assessed for complete family history including, three generations, and personal medical history to identify the hereditary concern. We at PCCM focus on genetic counseling and testing including other genes in addition to BRCA1 and BRCA2 which are shown to contribute to the development of cancers. As the general population is financially challenged to pay for genetic testing, PCCM has provided free or reduced cost genetic counseling for over 450 patients and genetic testing to approximately 260 patients since 2017. For patients diagnosed with disease-causing mutations or variations of unknown significance, the results are discussed with patients and the families. The patients and the relatives are guided appropriately with an action plan. High-risk individuals are recommended to have regular follow-up, timely radiological assessment and lifestyle changes for effective prevention and management.

PCCM functions to educate and sensitize people to the rising need of genetic screening with the help of well-trained genetic counselors. Our genetic clinic designs and conducts multi-disciplinary projects focusing on the Indian-specific characteristics of breast cancer. PCCM extrapolates data through various projects to narrate the Indian population scenarios. Studies within PCCM aims to maintain and publish Indian data. PCCM works with the collaborators in order to develop projects. India's population shows a unique scenario as compared to western population. The Indian population reveals approximately 25% BRCA carriers as against the published statistics of 15% in the west. For the unaffected individuals, mutation status proves to be helpful to quantify the risk and to plan preventive measures. For example, a BRCA positive, unaffected women with a strong family history can be recommended a risk-reducing surgery. Genetic results prove to be the decision makers in patients who have not undergone surgery before the genetic testing. PCCM plays an important role in risk assessment and risk mitigation for cancer risk reduction. As new therapeutic options emerge in personalized care, the need for genetic profiling is on the rise. PCCM attempts to take note of the carrier status to find the best available treatment options. We encounter the ideal scenarios which guide us to achieve our vision and the unfortunate scenarios only emphasize the need to continue educating people. From pre-diagnostic awareness to post treatment support, PCCM serves as a model for other cancer centers to replicate.

> “THESE CHANGES IN THE GENES CAN NOW BE DETECTED BY DIFFERENT DNA SEQUENCING TECHNIQUES”

How Covid-19 is impacting on cancer care in SA

Ines Buccimazza and Jenny Edge
South Africa

23 December 2005. Father Christmas visits the Oncology Ward at the Unitas Hospital in Pretoria, to give the young Cancer patients a Christmas present. South Africa. (Photo: Waldo Swiegers/Media24/Gallo Images)

Postponing clinic visits and surgery is hardly in the best interest of all patients with cancer. While it is unclear whether elective cancer surgery is safe during this period, alternatives are equally ambiguous. In some cancers, delaying surgery is associated with poor cancer outcomes.

To date, no therapies have shown efficacy against Covid-19. How is this affecting surgical oncological care?

In healthcare, our professional schedules have changed in the interest of public safety. New official policies, largely based on mathematical epidemiological models, aim at predicting the trajectory of the Covid-19 pandemic.

Leaders use measures of potential disease burden (infection and mortality estimates), to inform the steps for strengthening healthcare capacity and civic imperatives. The short-term public health decisions for the optimal use of resources based on epidemiological models should be grounded in data for local predictions – epidemics do not follow identical paths globally. The validity of the data, confirmed and rigorously evaluated, will ensure that these projections are robust and reliable.

The public safety narrative galvanised us to vacate wards and intensive care units in preparation for the tsunami of patients. Some operating theatres have been allocated for the sole purpose of operating on persons under investigation (PUI) or Covid-19 patients. Elective lists have been indefinitely cancelled. Outpatient clinics have been cancelled (or significantly reduced), and patients moved to telehealth platforms.

To save resources and preserve the surgical workforce, it is envisioned that the personnel working in surgical departments will be available on the frontline of Covid-19 management. We have been subjected to many drills on donning and doffing personal protective equipment (PPEs). A daily avalanche of protocols, revised protocols, new directives and testing policies flood our email InBoxes. Many of these are conflicting or confusing; all increase anxiety. Each day brings new information, forcing us to once again adapt our workflow. The pandemic is overwhelming and stressful: We need to keep calm, be sensible and promote evidence-based information and continue to manage all our patients.

What is the evidence?

Postponing clinic visits and surgery is hardly in the best interest of all patients with cancer. While it is unclear whether elective cancer surgery is safe during this period, alternatives are equally ambiguous. In some cancers, e.g. breast cancer, delaying surgery is associated with poor cancer outcomes. A paper from Geneva (Lancet 2005) compared the outcome of women with breast cancer who refused surgery to those who had surgery: Their mortality was doubled.

Many societies, (for example European Society Surgical Oncology) acknowledge that running a normal cancer care service in these challenging times is unlikely, and have issued guidelines relating to clinic visits (relegating most referrals/reviews to telehealth), and cancer treatments, including surgery. Most have made the assumption that the delay to surgery may be three months. It is unclear whether these guidelines are applicable in a resource-constrained environment.

Telehealth is an attractive alternative to real-time clinic visits, but may not be an attainable goal in the public sector in South Africa where mobile phone numbers are unreliable and most patients cannot afford smartphones or own tablets/computers.

As the humanitarian catastrophe continues to unfold, with over 3.2 million infections and over 220,000 deaths globally, and no sign of infections abating, we are presented

with managing patients with non-Covid-19 conditions, such as cancer.

It will not be "business as usual". Acknowledging that cancer patients face double jeopardy during the Covid-19 pandemic, it is important to strike a balance between the immediate needs of Covid-19 patients and the ongoing needs of non-Covid-19 patients who need lifesaving medical care and limited exposure to nosocomial infections. The challenge will be to find a tenuous balance between under-treatment, potentially resulting in more deaths in the medium-to-long term from cancer recurrences, and an increasing risk of death from Covid-19 in this vulnerable patient population.

In this war, waged on two fronts, patients and clinicians will deliberate on difficult decisions. Equal importance should be given to ensuring effective prevention of cross-infection with Covid-19 and rational provision of cancer treatment. The collision of cancer care and Covid-19 can be compared to a battle and Kutikov et al state that "the combat plan during this battle must involve patience, communication, diligence and resolve. Risks must be balanced carefully, public health strategies thoroughly implemented and resources utilised wisely."

How can the available evidence guide convincing decisions regarding cancer care?

Tables stratifying patients into a low, intermediate or high-risk category of progression with cancer if delays ensue, versus the attendant risk for significant morbidity from Covid-19 infection are consensus-based, but do provide recommendations on whether or not to proceed with surgical or oncological treatments. Categorising cancer care into four timelines has also been used to triage patients based on whether delays to treatment impact on the quality and quantity of life.

A limitation of these strategies is that local conditions and resources are not taken into consideration. The trajectory of the pandemic is highly variable across different regions and the capacity of the local healthcare systems to meet existing and projected needs relating to Covid-19 need to be considered.

This requires knowledge of the pandemic phase in the local healthcare system. In the preparatory phase, the healthcare workforce and resources are available, whereas in the acute and crisis phases, there is either limited functional capacity that through strategic planning can deliver routine cancer care, or there is no surplus capacity due to an overwhelming number of Covid-19 cases, respectively.

The provision of palliative care (PC) for terminal patients must be protected. Guidelines for administering PC to patients with Covid-19 have been developed, however, PC services in South Africa are not able to cope with the existing burden of disease. The full impact of the Covid-19 pandemic on community-based services has yet to be realised and we have already witnessed PC patients with symptoms of shortness of breath seeking hospital care, being incorrectly triaged as being, PUI making access to care even more problematic.

The most compelling guidelines have been issued by the American College of Surgeons, combining the phase of the pandemic with the priority category of cancer patients. They have mitigated the blanket ban on "elective" surgery in a considered manner, so that even during the acute phase of the pandemic, safe cancer care can be offered to ensure optimal patient outcomes.

Within a short period, our approach to patient care has been transformed. A recent NEJM Perspective relating to Covid-19-ventilated patients remarked that maintaining physical distancing in a caring profession is unchartered territory for most of us. It is necessary to find ways of bridging this difficult situation while concurrently maintaining our humanity and patient-centred approach.

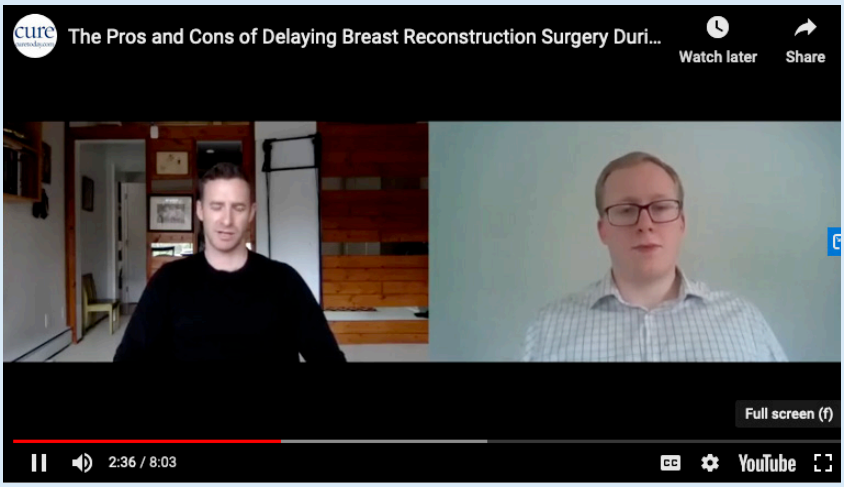
A concern for cancer patients is that their needs will be neglected during the Covid-19 crisis. It is our hope that the inherent empathy of cancer clinicians will maintain this focus and overcome the barricades presented by the Covid-19 pandemic.

Dr Ines Buccimazza is head of the Clinical Unit of Breast and Endocrine surgery, Inkosi Albert Luthuli Central Hospital, Durban. (University of KZN). She is currently the President of ASSA (Association of Surgeons South Africa). Dr Jenny Edge is head of the Breast and Endocrine Unit, Division of Surgery, Department Surgical Sciences, Stellenbosch University (affiliated with Tygerberg Hospital).

> "POSTPONING CLINIC VISITS AND SURGERY IS HARDLY IN THE BEST INTEREST OF ALL PATIENTS WITH CANCER. WHILE IT IS UNCLEAR WHETHER ELECTIVE CANCER SURGERY IS SAFE DURING THIS PERIOD, ALTERNATIVES ARE EQUALLY AMBIGUOUS. IN SOME CANCERS, DELAYING SURGERY IS ASSOCIATED WITH POOR CANCER OUTCOMES."

The Pros and Cons of Delaying Breast Reconstruction Surgery During the COVID-19 Pandemic

CURE®



In an interview with CURE®, Dr. Jonathan Bank
https://www.youtube.com/watch?time_continue=11&v=Lw79HtnvBNM&feature=emb_title

> ALTHOUGH THERE ARE ADVANTAGES TO HAVING RECONSTRUCTIVE SURGERY IMMEDIATELY, THERE ARE ALSO BENEFITS TO WAITING AND SPACING OUT SURGERIES IN PATIENTS WHO MAY HAVE ALREADY STARTED THE RECONSTRUCTION PROCESS BEFORE THE SPREAD OF COVID-19.

The development and spread of the novel coronavirus has forced all elective medical procedures to take a backseat to care that is deemed essential – or lifesaving – to keep people from contracting COVID-19.

One of those procedures, reconstructive surgery following breast cancer, has all but come to a screeching halt.

In an interview with *CURE®*, Dr. Jonathan Bank, a board-certified plastic surgeon at New York Breast Reconstruction and Aesthetic (NYBRA) Plastic Surgery, discussed the pros and cons of delaying breast reconstruction surgery for an unknown period due to COVID-19.

"In terms of the reconstruction, there are pros and cons to doing reconstruction in different time sets," Bank, who specializes in breast reconstruction after cancer, said. "For instance, in the case of mastectomy or a bilateral mastectomy there are many benefits to performing an immediate reconstruction."

The advantages of an immediate reconstruction, according to Bank, include preserving the natural skin envelope, the skin remains soft and has its natural shape.

"Psychologically, there's huge advantage in performing an immediate reconstruction," he said. "Now, that's not to say delayed reconstruction is not an option. It's absolutely an option. But you're starting off with a slight disadvantage."

Although there are advantages to having reconstructive surgery immediately, there are also benefits to waiting and spacing out surgeries in patients who may have already started the reconstruction process before the spread of COVID-19.

"That includes the tissue that was operated on, the skin, the fat underneath the skin, everything goes through a healing sequence that just takes time to calm down," he said. "Actually, the longer you wait the better off you are in terms of the palette that you are now working on. If you operate too soon, things may still be swollen, they may not be as supple and easily managed surgically."

Bank assures patients not to worry about having to push off those follow-up reconstructive surgeries. The tissue expanders that may have been originally placed can stay in the body for years, he said.

"It's not the most comfortable thing in the world, it definitely throws a wrench in life planning, but again in a risk-benefit balance, there is no problem to wait just to be safe," Bank concluded.

Adapting cancer peer support to the COVID-19 pandemic

Leonie Young, *Choices Cancer Support Centre, Peer Support Coordinator*
Brisbane, Australia

Leonie Young (left) and Janine Porter-Steele, RN, PhD, Choices Manager

What a difference a year makes! Last year many of us were in Prague learning, connecting, and enjoying each other's company. Remember the crowds as we walked together in the AVON Breast Cancer Walk. Remember jumping on and off the crowded metro as we explored the city, and the fun we had at the conference dinner. We were together enjoying the experience with the added connection of being united in our efforts to learn more about breast cancer and how to better support those affected by a diagnosis.

We are now connected by another common experience, the COVID-19 pandemic. There are so many similarities with a cancer diagnosis when you think about it, and perhaps it's a reminder that we can learn from all of life's experiences and, importantly, not forget those lessons. Cancer diagnoses came into our lives without permission and so have the ramifications imposed on the world due to this pandemic. Just as when we receive a cancer diagnosis, remaining socially linked is vital.

We know through our Reach to Recovery International network how important peer support and social connections are and, of course, there are mountains of examples supporting this opinion. The pandemic has reminded us that life can be unpredictable. Those living well after a cancer diagnosis have the benefit of not always having this thought foremost in their minds, but those living with metastatic cancer do; cancer forces us to look at life differently and the pandemic has added another layer.

With this in mind the Choices Cancer Support Centre (Choices) at The Wesley Hospital in Brisbane, Australia has been creative and initiated a number of opportunities to help people remain connected and reduce the feelings of isolation. The key has been adaptability and flexibility. The programs look a little different and it has given us the opportunity to test some initiatives that we may continue when life gets back to "normal." For example, we have developed Zoom sessions for support groups, yoga, and other exercise programs and have utilised Facebook and WhatsApp by posting videos and blogs. One positive outcome is that we have been able to include people in rural and regional areas of Australia. Another is that our programs are now more accessible for those with advanced disease who find it difficult to attend face-to-face sessions regardless of pandemic restrictions. We have made it our aim to phone and check in on people who regularly attend our sessions and provide support and strategies to cope; doctors and other clinicians know we are available to speak to newly diagnosed patients and those starting cancer treatments, and we are able to visit patients in the cancer wards of the hospital.

Another example of how our programs are different at the moment is that our very valuable volunteers have been unable to volunteer as they usually do by being present in the Choices' Rooms. They are still contributing, however, by talking with patients on the telephone and continuing to sew turbans and headwear for our wig and turban program. We make sure we speak weekly with the volunteers, too, to check in on their health and well-being.

The Wesley Hospital Choices Cancer Support Centre

> "SOMETIMES WE NEED SOMEONE TO SIMPLY BE THERE, NOT TO FIX ANYTHING OR DO ANYTHING IN PARTICULAR, BUT TO JUST LET US FEEL WE ARE SUPPORTED AND CARED ABOUT – ANON"

How the Indonesia Breast Cancer Foundation stays positive and acts positive during the COVID-19 outbreak

Ning Anhar
Indonesia

COVID-19 has spread around the world, including in Indonesia, with devastating effects. In addition to witnessing this catastrophe, however, we are also seeing acts of kindness and caring from people and organizations toward the vulnerable communities that might otherwise fall through the cracks of the pandemic.

The Indonesia Breast Cancer Foundation (IBCF) understands and is concerned about the tough position that doctors and other healthcare workers are in at some cancer hospitals in Jakarta. They need to continue to provide full treatment to the cancer patients, even those affected by this corona virus, often with lack of Personal Protection Equipment (PPE). In response to this situation and to show its appreciation, the IBCF, with the help of its survivors, caregivers, and volunteers, has conducted fund raising activities in order to donate Personal Protective Equipment (PPE) and food supplies to the healthcare workers at the Dharmais National Cancer Hospitals, the Gatot Subroto Army Hospital, and the Emergency Hospital for COVID-19 Wisma Atlet Kemayoran, Regional Public Hospital Pasar Rebo, who are working so hard at this difficult time.

The IBCF is also aware of the economic downturn that has affected many underserved communities in Indonesia. Especially during this fasting month of Ramadan 2020, the IBCF's breast cancer survivors, caregivers, and volunteers are showing their sympathy to those who are affected by this situation by donating some food supplies and necessary face-masks to five orphanages which are homes to a total of 108 children.

It is the IBCF's hope that these contributions will have meanings to those affected by this pandemic, especially for the front liners who are trying to help and to cure COVID-19 patients at the hospitals, whose motto is *"Let us work for you, you stay home for us."*

Greetings from the IBCF: "Show You Care Be Aware."

Donations from the IBCF to Dharmais National Cancer Hospital, Gatot Soebroto Army Hospital, and Regional Public Hospital Pasar Rebo, in Jakarta, Indonesia

Donation from the IBCF to Orphanages

Rest in God: How to keep living when life gets hard

Cheryle T. Ricks
Baltimore, Maryland, USA

Cheryle T. Ricks

Below is an excerpt from the Preface of Cheryle's book of the same title

As I mentioned in my first book, Sister Circle: *The Power of Sisterhood - A Guide to Becoming the Woman God Designed You to Be*, life can be very difficult, and those difficulties work in us like nothing else can. In the first part of my life, I survived domestic violence, a mental health breakdown, and no self-esteem.

In the second part of my life, I discovered my purpose, which is the greatest discovery a person can make. When we learn what we were created to do, we get on the road called Destiny and Purpose. That road is not a journey for the faint of heart! When we step out on faith and pursue the dream and passion that God has put in our heart, we will face trials, tribulations, and challenges that will make us question whether we are doing the right thing.

On my road of Destiny and Purpose, I faced the foreclosure of my home, being diagnosed with skin cancer and breast cancer, being sued by a debt collector, and bankruptcy. But God! God made the worst part of my life the best part of my life. God gave me a true village! During that most difficult time, I learned how many people in my life truly loved and cared about me. I continued to live my life in spite of what I was going through. I decided not to make my circumstances my life. I resolved to keep enjoying my life and the people and the things I always had. I reminded myself how blessed I was and how awesome my life still was even though I had these situations. I took everything to God and allowed Him to walk me through those challenges like He had done for every other problem I had faced in my life. I trusted His unconditional love for me and the promises in His Word. I held on to my faith in God, who I was in Him, and the plan He has for my life. I believed He would bring me through everything I was going through and I was going to be better for having gone through it, and I was!

But more importantly, we must receive the true love of God, keep our faith in Him, and hold on to the hope that God created us for much more than we can see in our current situation.

I have learned that I have a choice about how my problems, circumstances, or situations would affect how I enjoy my life. Today, in spite of having breast cancer and losing one of my breasts, going through months of treatment for skin cancer, the foreclosure of my home, being sued, and filing for bankruptcy, I have managed to live my best life yet.

I am trusting that God will bring us through this Coronavirus (COVID-19) the same way He did for every other life-altering challenge we have overcome.

Cheryle's books are available at http://www.xulonpress.com/bookstore/bookdetail.php?PB_ISBN=9781545676646

> **"I HAVE LEARNED THAT I HAVE A CHOICE ABOUT HOW MY PROBLEMS, CIRCUMSTANCES, OR SITUATIONS WOULD AFFECT HOW I ENJOY MY LIFE"**

Spotlight on: India!

Hope for the hopeless

Chandra Rekha Gulabani
New Delhi, India

To date little is known about the outcome of patients with advanced or metastatic breast cancer (ABC/MBC) from developing countries. Some of them come with early breast cancer (EBC) but during or immediately after treatment develop MBC. Hospitals do not register these cases as metastatic disease. Some may be relapse cases, treated as per their previous Hospital Card. There is hardly any well planned and organized recording of ABC/ MBC patients. Normally it is seen that 45-50% of patients come as EBC; 35-40% are Locally Advanced Breast Cancer (LABC) and 10-15% come as MBC/ABC. Around 30% of EBC patients turn into ABC/MBC patients. The final result is 50% EBC and 50% ABC/MBC.

Indian Cancer Society Delhi (ICSD) has been working in the field of Cancer Control since 1983. ICSD has always had a special unit for breast cancer care working under the ICS Emotional Support group Cancer Sahyog. It provides workshops and training on breast cancer and post operatives issues like lymphedema. It provides a free set of medical bras and prosthesis to mastectomy patients in Delhi to enhance body image and boost the confidence of women. A WhatsApp group of EBC/ABC/ MBC was created as we realized that the value of peer group counseling.

ICSD realized that the needs of the ABC/ MBC are inadequately addressed. Gaps between needs and the infrastructure were identified. ICSD has been working in the field of advocacy and screening since 1983 and realized that as awareness spread a large number of women were coming from surrounding Tier 2 towns and villages to Delhi for treatment. Most presented in advanced stage of disease when both trauma and expense is high. ICS volunteers tried to understand what challenges they faced, which included:

1. Lack of awareness and screening or treatment facilities
2. Associated taboo and social stigma
3. Cost and length of treatment
4. Logistic arrangements
5. Fear of losing livelihood and life

ICSD felt the need to understand local conditions and to ensure that women come at treatable and curable stages. An ICS team of selected volunteers goes to the pilgrim town Vrindava and its villages once a month on an awareness campaign. We identify influencers and service providers in the area to guide them. We collaborate with local and district authorities to provide awareness and screening, and to ensure that patients report for treatment. Our ultimate aim is for local faculties to take ownership of health in the district.

Indian Cancer Society event for breast cancer patients and survivors

> “OUR ULTIMATE AIM IS FOR LOCAL FACULTIES TO TAKE OWNERSHIP OF HEALTH IN THE DISTRICT.”
>
> —C. Rekha Gulanabani

Spotlight on: Fiji!

Abreast In A Boat outreach 2020

Adriana Bartoli, Abreast In A Boat
Vancouver, Canada

Four members of Abreast In A Boat and Dr. Don McKenzie travelled to Fiji in February 2020. Thank you to Adriana Bartoli, Dolly Devi, Jane Frost, Judy Crumlin, and Dr Don, for bringing our message of hope and an awareness of breast cancer to the Fiji Islands. Here is their story.

How do you describe the power of a sport that can change a life in minutes, especially for those who have experienced a breast cancer diagnosis and treatment? You will find the answer in this story.

I will start with a big **BULA!** - a word you will hear mostly in Fiji. It is accompanied by a wide smile each time you meet a Fijian, together with smiling deep brown eyes and the feeling of being cuddled in paradise.

Every great dream begins with a great dreamer. This story begins in Vancouver, Canada in 2017, where Dolly Devi was treated for breast cancer and joined Abreast In A Boat, a breast cancer survivor dragon boat team established 25 years ago.

Dolly felt the empowerment of the sport that allowed her to return to a new and active life and she began to dream about empowering and bringing hope to breast cancer survivors in her homeland, Fiji.

You can say, dream a dream and your dream will come true. So it happened for Dolly. The Bula Outreach Crew, an independent team of seasoned dragon boaters from Canada, Australia, and the US travelled to Fiji in February to share with the local breast cancer survivors the joy and benefits of this sport for their physical health and spirit.

Dr. Don McKenzie and Jane Frost, founders of Abreast In A Boat, joined the Bula Crew to meet 30 local breast cancer survivors and six all cancer survivors, who had never been on a dragon boat. The locals came all the way to Denaru from Suva, Lautoka and Nadi. It was World Cancer Day, a perfect time to celebrate. After just a few minutes of paddling in the warm, turquoise waters, the shy novices were happy and full of laughter, and, more importantly, feeling the strength of the sport.

The beautiful new dragon boat was blessed by Chinese, Native, Hindu and Christian ceremonies, and it hosted the first Flower Ceremony in the Pacific Islands.

The enthusiasm of the novices and the Bula Outreach Crew was outstanding. We paddled as much as we could, in perfect weather and a great sea. The novices did land training on the beach while the boat was out. The first paddle on Tuesday was almost a full boat of novices, including drummer and steers, a great accomplishment.

When the time came to thank our hosts, the list was immense. There are not enough words to thank the Fiji Cancer Society for their support of this outreach. The dedication and love of the committees in Suva and Nadi made it all possible. More than 50 paddles were donated from Australia, Italy and Canada.

Two new breast cancer teams are enjoying a full and active life after breast cancer. The sport is the engine. Other cancer survivors are joining them in discovering the process of building a strength we never thought possible.

This is how lives can be changed for good and dreams can come true, when people bond together. Togetherness makes the difference.

Local novice members of the Fiji-D-Dragons new teams in Fiji

Spotlight on: Fiji! *(continued)*

Blessing of the dragon by the Hindu Ceremony.

Blessing of the Dragon by the Native Ceremony.

> "THIS IS HOW LIVES CAN BE CHANGED FOR GOOD AND DREAMS CAN COME TRUE, WHEN PEOPLE BOND TOGETHER. TOGETHERNESS MAKES THE DIFFERENCE."

First Flower Ceremony held in the South Pacific Islands.

Paddle tunnel celebrating the Fijian novices.

Spotlight on: Greece!

Alma zois peer-to-peer programme - bridging psychosocial support with the needs of public hospitals in Greece

Margarita Chrysanthou-Piterou, *Volunteer and* Eleni Leka*, Director of Social Services,*
Hellenic Association of Women with Breast Cancer "Alma Zois", Athens, Greece

Since 1988, Alma Zois has implemented its peer-to-peer support programme in both private and public hospitals in Athens, Patras (since 2001), and Thessaloniki (since 2008) and has gained recognition throughout the communities. Alma Zois volunteers, trained and supervised by experienced social workers, help women diagnosed with breast cancer to come to terms with their feelings and manage their fears. Above all, they provide examples of women who have recuperated and are now active members of the community. In Greece however, not all patients welcome this intervention because the stigma attached to cancer is embedded in Greek society.

During the last decade, scientific progress in the early detection and treatment of breast cancer has led to reduced hospitalization time after surgery. Health professionals in public hospitals are confronted with an immense workload and so the psychosocial needs of patients are not always met. Alma Zois provides access to a greater number of women by adapting its peer-to-peer support programme in the following way. A group of volunteers is assigned to a particular hospital and a volunteer is designated to attend on a particular day and time. At the doctor's discretion, the volunteer provides support to post-operative patients. The visit takes place in the patient's room or the outpatient office and, although informing the patient and requesting her permission should be a *sine qua non condition*, this does not always occur and the patient may be reluctant to see the volunteer. Other obstacles, although often overcome, are the presence of family members and the non-matching of age, family, and type of breast cancer surgery. Yet, the contact with the patient gives the volunteer the opportunity to explain the purpose of her visit, listen to the patient's feelings, and provide her with printed material explaining the programme. The volunteer opens up channels of communication with the Association's psychosocial services and ultimately delivers the quintessential message: "*You are not alone in this journey.*"

> "IF YOU COULD DO IT, WHY NOT ME?"

Due to the financial crisis in Greece in recent years, public hospitals cater to a larger number of women patients, including immigrants and refugees, who have family problems that compete with the severity of cancer. Even here, the supportive and honest approach of the volunteer is capable of allaying their fears and empowering them with courage and hope. The presence of a healthy, smiling volunteer who shares the patient's breast cancer experience sends a definitive message. She is showing her the future and a seed is planted: "*If you could do it, why not me?*"

Our peer-support programme is accessible, adaptable, and vibrant. It is imperative to support women so they can confront the future with perspective and optimism.

Avocado Stuffed with Tuna Ceviche salad

Global Kitchen

Ingredients:

2 avocados (If you don't have avocados, you can substitute cored tomatoes)

1 (12 oz.) can chunk light tuna in water, drained

1/3 cup garbanzo beans, drained

2 tablespoons minced red onion

1 teaspoon olive oil

1 plum tomato, seeded and diced,

2 tablespoons chopped cilantro

Salt and pepper to taste

Juice and zest of 1 lime

Directions:

1. Place tuna, tomato, cilantro, onion, and garbanzo beans in bowl.
2. Gently stir in oil and lemon zest.
3. Add salt and pepper to taste.
4. Slice avocados in half and remove seeds. Squeeze lime juice of avocados.
5. Fill avocados evening with tuna mixture and serve.

COMBINED PREP AND COOKING TIME: 15 MINUTES

SERVINGS: 2

Global Kitchen

White Bean and Chicken Chili

COMBINED PREP AND COOKING TIME: 6 HRS 30 MINUTES SLOW COOKED ON LOW; 3 HOURS 30 MINUTES SLOW COOKED ON HIGH

SERVINGS: 6

Ingredients:

2 (15 oz.) cans white beans, rinsed and drained
4 cups chicken broth
1 tablespoon vegetable oil
2 chicken breasts (with or without bone)
Salt and pepper
2 onions, chopped
4 cloves garlic, chopped
2 (4 oz.) cans roasted green chilies, drained
1 cup water
1 tablespoon ground cumin
Sour cream
Tortilla chips

Directions:

1. Place beans and broth in a slow cooker. Cover and cook on high for 2 hours.
2. Warm oil in skillet over medium-high heat. Sprinkle both sides of chicken with salt and pepper. Place in skillet and cook until brown, about 4 minutes. Turn and cook for 2 more minutes. Transfer to a plate and discard skin, if any. Add onions and garlic to skilled and cook until softened, about 5 minutes. Refrigerate chicken and onion mixture.
3. After beans and broth have cooked for 2 hours, add onion mixture, chilies, 1 cup water, and cumin to slow cooker. Stir, then add chicken.
4. Cook on low for 6 hours or high for 3 hours. Remove 1 cup beans and ½ cup liquid from slow cooker and puree in blender, then return to slow cooker. Remove chicken, shred it, and return it to slow cooker.
5. Spoon into individual bowls and serve with dollop of sour cream and crumbled tortilla chips.