“Oncorecovery” - innovative approach in oncoplastic and reconstructive surgery in breast cancer treatment in Ukraine

L.M. Derkach  
Dnipro Humanitarian University

D.G. Mozhaev  
Dnipropetrovsk Medical and Surgical Center named after Pirogov

Article info  
Received 04.12.2019  
Accepted 30.12.2019

1) Ph.D in Psychology, Professor, Head of Educational Department, Dnipro Humanitarian University  
lydia48@i.ua

2) Surgical Oncologist  
Dnipropetrovsk Medical and Surgical Center named after Pirogov  
dmozhayev@gmail.com

Breast cancer is ranked first among women with cancer. Surgical treatment is included in all programs for radical treatment of breast cancer. Oncoplastic and reconstructive surgery for breast cancer significantly improves the quality of life of patients. However, the satisfaction of patients with the aesthetic result of cancer operations may be different. This is influenced by the patient’s awareness of the possible methods and risks of surgery in her case and the coordination of the work of the team of oncologist and plastic surgeon. To solve this problem, the concept of ONCORECOVERY is proposed, which involves combining knowledge of breast cancer, plastic surgery and psychology into one specialist. The advantage of the concept is the effective communication between the patient and the surgeon who has skills in cancer surgery and reconstructive plastic surgery of the breast. This approach allows you to choose the optimal type of surgery, considering the wishes of the patient and provide psychological support before and after surgery to obtain a high level of satisfaction with the result.

Key words: breast cancer; oncoplastic and reconstructive breast surgery; psychological support.

Introduction

It is common knowledge that breast cancer is the leading cause of disease and mortality worldwide. Statistics from the European Cancer Information System (ECIS) in 2018 reported that more than 400,000 new cases were diagnosed. The major causes of breast-cancer deaths vary across countries depending on the level of economic development, social and lifestyle determinants. The international and cross-cultural contributions of researchers and clinicians (Ades, 2017; Agrawal, 2019; Bertozzi, et al., 2017; Cohen, et al., 2016; Dimitrova, et al., 2016; Haloua, et al., 2013; Doroshenko, et al., 2018, etc.) in the field of reconstructive and oncoplastic breast-conserving surgery could be purposefully integrated into undergraduate global university oncology education.

The present article examines the current developments in breast cancer research, suggesting a new psychoneurological approach for the psychological counseling of patients after Oncoplastic and Immediate Reconstructive Breast Surgery in Ukraine. It is noteworthy, that financial constraints and the possibility to afford specialized and personalized oncology treatment is a challenge for Ukrainian women residing in a low-income country. In view of this, psychological factors are of crucial importance for a patient’s treatment and care as they predict her satisfaction with operative and oncologic outcomes with operable breast cancer. Additionally, the given research studies career patterns of surgical oncologists, and develops the nature of psychological support rendered to in-patients before and after breast-conserving or reconstructive surgery. Little has been done in this area regarding countries with emerging economies. We believe, this work adds to the limited findings in the given area (Jonczyk, et al., 2018; Ryzhov, et al., 2018; Leung, et al., 2019). It also extends our previous research by developing and examining a Three-Dimensional Model of Training surgical oncologists based on a new paradigm of learning. The innovative power of the paradigm is founded in the integrated approach that
combines two major aspects of the training both surgical-oncologists-scientists and practitioners, and emphasizing:

the present status and prospects of onco
future breast surgeons;

According to the Model suggested, a Surgical Oncologist is responsible for decision and choice-making of adequate surgical strategy, methods of reconstruction and high-quality health care of a patient. Therefore, a highly qualified breast cancer surgeon performs the functions of the team of three multidisciplinary surgeons during the operation, namely:

1. a Surgical oncologist (or a breast-surgeon);
2. a Plastic surgeon;
3. a Psychologist (or a psychological therapist engaged in active cancer treatment).

Thus, according to the Model offered, a team of multiprofessional clinicians is replaced by one surgical oncologist, a healthy perfectionist, who has received a special University training in the three mentioned above aspects of professional training. It is believed that she strives for excellence professionally and personally, maximizing social concern for others and one's own potential. Therefore, analyzing and generalizing current methodology, theory and practices in breast cancer surgery we coined a Project under the umbrella title – "Oncorecovery".

Why "Oncorecovery"?

For Ukrainian women socioeconomic inequalities turn into the barrier to accessing health care services in Oncoplastic and Reconstructive Breast Surgery which proved to be very expensive nowadays. Besides, the female population of Ukraine suffers from breast cancer, ranking the second place in country's cancer statistics with considerations of the factors of the Chernobyl accident (Prysyažnyuk et al, 2019). The scientists conclude that "there is a steady increase in the incidence rate, but in recent years this growth has slowed down" (Prysyažnyuk, 2019:150).

As to Ukraine, it is one of the priorities in Medical Reform and health care to introduce a new paradigm of clinicians' training into the Oncologists Curriculum at the Universities as a Model which provides breast cancer prevention, early detection, survival care and outcomes. As the innovative Model it necessarily requires careful theoretical and methodological research. The suggested methodological basis for constructing the innovative paradigm of educating future surgical oncologists eliminates the gap between student training and business needs, in our view. (Derkach, 2017). Along with it, the Model deals with four priorities regarding patient-reported outcome measures (PROMs) following oncoplastic or immediate breast reconstructive surgery, namely: promoting excellence in quality of life domains, satisfaction domains, psychological counseling which focuses on patient's perceptions of effectiveness of surgical interventions and efficient tools, a cost comparison and outcome analysis.

According to Blankensteijn, et al. (2019), “the integration of oncological surgery with reconstructive techniques has gained popularity in the treatment of breast cancer, oncoplastic reconstruction after partial mastectomy can be performed by the breast surgeon or in cooperation with a consulted plastic surgeon (Blankensteijn, 2019). Along with it, the researchers state that “the cornerstone of reconstructive surgery following mastectomy is to restore cosmesis and improve physical and psychological health” (Cordova,2019:441). Further on, the authors conclude that “… many reviews have failed to show significant improvements in quality of life domains following breast reconstruction compared mastectomy alone” (Cordova, p.441).

Considering this, "Oncorecovery" utilizes a complex usage of oncoplastic and immediate reconstructive surgery at radical breast-cancer operations with the obligatory psychological support rendered by the surgical oncologist before and after mastectomy. It also provides conditions for achieving a high-quality cancer survivorship care. And, we reflect on hard-fought progress in the Ukrainian oncological breast surgery(Hatch, et al,2015; Rak v Ukraini, 2016-2017), regarding the analysis of advances and losses in the process of Medical Reform, we have an opportunity to make important changes in how we approach development. The cancer road should be extended to embrace a life-long concept of ONCORECOVERY by the oncopatients from the very start of diagnostics up to the very end of operative treatment.

It is evident, that the peculiarity of the "Oncorecovery" is in the fact that oncological, plastic and psychological phases of the operation are performed by one general surgeon, namely, a breast surgical oncologist. In our view, the proposed methodological basis for constructing the innovative paradigm of educating future Ukrainian breast surgeons has a great significant potential to benefit not only the Ukrainian people but the global community as well, especially for low-income countries and emerging economies. We continue to utilize this vital research in our own work by powering the development of innovative psychological support interventions which meet the demands of the Ukrainian population.

What are, then, innovations and advancements of our approach?

Firstly, our practice testifies that the more responsibility is concentrated on one personality while decision - making during the operation, the more effective the result is. Secondly, a cost-utility analysis of the complex operation in Ukraine is essentially reduced if it is performed by one competent professional, which is of primary importance for women with low and average income in this low-paid country. Thirdly, to reduce a psychological distress while communicating only with one surgeon, which makes it possible to benefit from the opportunity to participate in mutually choosing the surgical technique. (Dahlback, 2017).

Similarly, publication edited by The European Commission Initiative on Breast Cancer (ECIBC) in 2019 (New European Recommendations for Breast Cancer) stresses the role of communication skills’ training for healthcare professionals.

And, fourthly, to strengthen a mutual trust because it is crucial to be honest with the patient regarding risks and complications as well as the detailed analysis of the PROMs instruments such as BREAST-Q, EORTC-Q30/Q23, Short Form 36, Fact--B and others. Our experience proved that communication highly motivates the two sides to exercise

Volume 36, Number 6, 2019

101
ONCORECOVERY THINKING and believe in the final oncorecovery of the novel operative treatment. Fifthly, the informational provision about contralateral reduction mammaplasty (CRM), as well as concerns about surgery risks and recovery time were adequately presented as it was important to create achievement motivation in patients. Besides, a new breast cancer treatment offers the hope of high oncologic and aesthetic outcomes, longer life to women with operable breast cancer, as well as to satisfy their individual cosmetic demands, and, substantially, reduce the levels of stress, attributed to the operation.

Thus, the advances of the approach, and its benefits are in the combination of favorable conditions it provides for the effective and promising oncorecovery of a woman, suggesting and creating a wide range of psychological support needs of people currently receiving cancer care, achieving high-quality cancer survivorship care. Very few studies have examined how the nature of psychological support influences the motivation that drives women-patients behaviors in decision-making evaluating surgical algorithm (Bellavance, et al., 2016; Dahlback, et al., 2017; Francescini, et al., 2015; Jagi, et al, 2015;Power, et al., 2011 ). Moreover, it results in a high quality of life for a patient after having been operated on. Remarkably that, in-patients in their replies to our questionnaires, confirmed that they were highly satisfied with the results of the “Oncorecovery” approach. In comparison with the patients who were operated on by two teams of surgeons with the delay in time, and without a specialized individual psychological support for the patient and members of their family, the rates were much lower.

As in-patients concluded, they saved:

a) a definite sum of money paying for the services rendered to one surgeon but not for two teams of surgeons which is really a motivating factor for the Ukrainian women living in a low-paid country;

b) much of time being in-and-out patient, as surgical decisions adopted by one person were justified, and taken in-time, thus, causing the least aesthetic damage to a woman;

c) psychological support of a surgical oncologist 24 hours per night.

The core question is: why psychological support matters so much for an oncological patient being rendered by a surgical oncologist?

As we stated above, psychological factors do predict patient’s satisfaction with post mastectomy breast reconstruction or oncoplastic surgery. In our personal estimation, the clinician-psychologist must achieve a career success in the chosen field through a profound psychological literacy (Derkach, 2012; 2016). What does it mean “a successful career” in oncoplastic breast conserving surgery, after all? As the old proverb goes: “If you do not know where you are going, you will not know when you get there”. It goes without saying, the national culture influences definitions of perceived career success across cultures (Benson, 2013).

Therefore, in oncoplastic or breast reconstructive surgery, defining the level of individual psychological support, makes it possible to provide individual coping styles for a patient and a family care.

The provision of immediate psychological consultations by telephone in-person, individual face-to-face semi-structured interviews etc. in each particular case helped patients to reduce:

- emergencies;
- body image – postoperative asymmetry, effect of aesthetic outcome on psychosocial functioning and quality of life;
- psychological health troubles (depression, anxiety, stress);
- surgery risks;
- pessimistic mood on illness perception;
- disbelief in final oncorecovery;
- negative emotions exercised by the aesthetic shape of the breast;
- prospective evaluation of late cosmetic results following breast reconstruction results obtained at the operation;
- fears;
- loneliness;
- physical health troubles

Moreover, describing effective outcomes, and discussing safe-guarding issues immediately with the operated woman in greater detail, creates the climate of fruitful cooperation with the breast surgeon and the urgent need for problem-solving and decision-making by the two sides.

In other words, involvement of the patient in the analysis of dynamics of oncorecovery by suggesting her a factual information is a must and an urgent need as she deserves the access to the accurate reporting and self-control on the stages of oncorecovery. The impact of psychological interventions on a cancer survival destroys continuing uncertainty about prognosis and copes with fears about what lay ahead.

In view of this, improving access to psychological therapies for a patient and members of the family is of critical importance and offers assessment of their:

- psychological needs;
- personal support needs (money worries, mobility, practical tasks and personal care, relationship tensions);
- emotional support needs which are looked after as much as their physical needs (anxiety, depression, distress, changes in appearance, body image, etc.);
- consequences of the breast-cancer treatment, and the levels of emotional support for both sides;
- benefits from the opportunity to participate in choosing their surgical technique.

- cognitive-emotional decision-making (CEDM) for choice of surgery in women with breast cancer (Power, 2011).

Additionally, the innovative power of “Oncorecovery” project grounds on the neuro-psychological profile (Derkach, 2011) of each of the member, namely, a patient and a family carer, by:

- rendering reliable methods for supportive care;
- including individual and group support;
- psychological education, as well as a flexible communication training. Psychological support services provided by the surgical oncologist would see the people from the starting point of diagnosis till the end of the active treatment in a cancer center followed by the home based...
care and support. To sum it up, a guidance on delivering personalized care and support planning for breast-cancer survivors and family caregivers is of utmost importance for a patient and immediate relative.

Much to our regret, nowadays, there is not any educational program in Ukraine of training surgical oncologists, having grounded knowledge in all the three mentioned above spheres of research and practice.

Goals of the article

In view of this we would attempt suggesting a new interdisciplinary approach to innovating quality of training surgical oncologists. So, the innovative power of our paradigm is founded in the integrated approach that combines two major aspects of breast cancer surgery in training of oncologists. It emphasizes the Oncorecovery based on the complex use of Oncoplastic and Reconstructive Breast Surgery techniques simultaneously by one specialist with obligatory before and after the operation psychological counseling by the same clinician.

Results and Discussion

With this aim in purpose, we shall address the recent publications (2010-2019) of well-known professionals, researchers, practioners and top-performing breast surgeons both in this country and abroad. The theoretical, empirical and practical appeal of publications demonstrates the increased interest in these topics; similarly, the literature on breast cancer surgery has been growing rapidly in the last decade worldwide and in Ukraine, in particular (Bray et al., 2018; Chatterjee, et al., 2018; Clough, et al., 2015; Mooney, et al., 2017; New European Recommendations for Breast Cancer, 2019; Siegel, et al., 2019; What's New in Breast Cancer Research?, 2020). As we stated earlier, the given study presents a synthesized overview of a western literary sources and Ukrainian evidence for the efficacy of global breast cancer surgery.

Reconstructive and breast reconstructive surgery in Ukraine

Recent discourse in the breast cancer literature in this country (Leung et al., 2019) testifies that there is an increase in breast cancer incidents after the Chernobyl accident in Ukraine. According to statistical data (2018), breast cancer is the leading cancer in Ukrainian females (Doroshenko et al., 2018). The study dwells on the breast cancer screening to long-term monitoring cases in Ukraine. Cancer incidence in Chernobyl Pryazhnyuk, et al. (2019) affected the whole territory of the country but mostly severely were damaged the regions of Zhytomir and Volyn, Kyiv, Chernihiv, Rivne, Vinnytsia (Leung, et al., 2019:1; Ryzhov, A., Bray, F. et al., 2018). In the given areas NPP disaster exceeds the average Ukrainian level twice and sometimes thrice. According to Leung et al., (2019), "there is limited knowledge of the long-health effects of the Chernobyl nuclear power plant accident that occurred more than 30 years ago in Ukraine" (2019:1).

Considering this, a team of 17 scientists from the South-Eastern European countries launched the cross-cultural investigation (2017), aimed at investigating mortality trends of major cancers as well as breast cancer in four age groups in the mentioned countries. (Dimitrova, et al., 2017). The obtained results made it possible to conclude that: "mortality rates decreased significantly in all age-groups in most countries but increased up to 5% annually above age 55 in Ukraine, Serbia, Moldova, Cyprus." (Dimitrova, et al., 2017:43). The decrease in mortality trends, stated researchers, is attributed to improved cancer care and introduction of innovative approaches in treatment patients. (Ades, 2017; Bray, et al., 2018; Franceschini, et al., 2015; Jonczyk, et al., 2018). As for the worrying increasing mortality trends in the Ukrainian women 55-plus, little has been done in order to investigate the causes, risk factors and effects of the cancer control activities both in the urban and rural settings of the country(Leung, et al., 2019).

To sum it up, breast cancer in Ukraine is an emerging health problem and it ranks second as a cause of death after cardiovascular diseases. (Doroshenko et al., 2018).

The scope of these phenomena especially in rural regions of Ukraine remains unclear. Moreover, data on breast healthcare knowledge, perceptions and practice among Ukrainian rural women with an advanced form of a disease is limited in comparison with the urban ones.

These phenomena have indeed attached marked scholarly interest in the last two decades worldwide (Bertozzi, et al., 2017). Cancer Statistics in 2019 (Siegel, et al., 2019) studies and makes prognosis regarding the numbers of new cancer cases and deaths that will occur in the United States of America.

Global Cancer Statistics 2018; GLOBOCAN estimates the global burden of cancer across 20 world regions (Bray, et al., 2018). The researchers conclude that "the most frequently diagnosed cancer...substantially vary across countries" (Bray, et al., 2018:1). Innovative tendencies in breast cancer research are paid much attention to in American Cancer Society with the focus on breast cancer causes, lifestyle factors and habits as well as ways of prevention, detection and treatment breast cancer (American Cancer Society, 2020). Published works produced between 2000-2019 (Ades, et al., 2017; Bray, et al., 2018; Dimitrova, et al., 2017) identify the need for clarification of the construct Breast-Conserving Surgery and Oncoplastic surgery as an important consideration in Breast-Conserving Surgery. They also expand on the theoretical perspectives used to examine evolving trends in Breast Surgery and training. Regrettably, so far there is no well-designed educational program of a quality university training.

What seems clear, however, is the urgent need to proceed from a rhetoric of change to the rhetoric of creative moves in designing new University programs of complex training of future surgical oncologists.

We add to the discussion by suggesting a set of propositions to further develop the global career discourse and use examples from contrasting global and cultural contexts. As we have already stated earlier, the first deals with our contribution by offering a Three-Dimensional career pattern of a surgical oncologist. A well-educated and trained, competent surgeon replaces a team of cancer specialists and, additionally, a clinical psychologist. Building on this model of a surgical oncologist, the number of Ukrainian patients with advanced cancer or any other form of cancer, will be able to pay less for the operation done as the cost of medical services rendered by one specialist...
essentially decreases. It requires a well-defined competency map for the job identifying the principal competences for each of the functions of the surgical oncologist, including the knowledge and skills.

We have initiated a project coined as “ONCORECOVERY” in the city of Dnepr, Ukraine, grounding on the above suggested Model of Proten Career of the surgical oncologist.

What are the final benefits and outcomes of the given model, then?

1. Career success (Benson, et al., 20130 which demands the use of career-success strategies, namely:

   a) Obligation creation for the simultaneously adopted decisions by one appropriate clinician performing as a surgical oncologist, plastic surgeon and a clinical psychologist whose final goal is oncorecovery of a patient;

   b) Personal status enhancement;

   • Information acquisition and high level of self-control
   • Emotional intelligence (interpersonal awareness, social awareness and self-awareness).

2. Our next suggestion touches upon psycho-neurological and emotional support for women suffering from breast cancer. Surgeon’s professional communication and personalized psychological support for a patient makes it possible to study her neurological profiles (Derkach, 2001). Brain asymmetry data also provides information on mechanisms of individual psychological support and counseling as well as on ways of quality life improvement and well-being after the operation. It creates favorable conditions for psychosocial interventions to improve quality of life: physical well-being, psychosocial well-being and sexual well-being) as well as emotional well-being for recently diagnosed cancer patients.

Conclusions

Thus, we have attempted to coin our vision of reducing the negative outcome and impact of breast cancer disease in Ukrainian women under resource-limited economy by suggesting a Three –Dimension Model of oncologist training aimed at development of ONCORECOVERY THINKING and a full recovery. Hence, we have analyzed and probed a new approach “Oncorecovery” to breast reconstructive microsurgery in Ukrainian conditions. Traditionally, the oncological and reconstructive stage of breast surgery needs the two teams of surgeons: an oncoseurgeon who starts first, and a plastic surgeon who operates on a patient afterwards. The two teams of surgeons make the situation very complicated as there is a huge financial problem for a Ukrainian patient - payment of surgical services.

The given paper advocates a re-thinking in finding cost-effective, accessible, affordable approach in breast cancer surgery that gives patients a chance for survival by acquiring adequate psychological literacy. The study showed that surgical oncologists can learn to integrate basic cognitive behavioral therapy methods (CBT) into their clinical practice and it immensely improved psychological outcomes for patients. We also directed the majority of our efforts towards supporting, developing the psychological care skills, pathways not only of surgical oncologists but a patient and his family, as well. The knowledge obtained, in turn, will help them adopt positive thinking, realistic decisions and behaviors that prolong their lives.

Further research

In order to deepen our understanding of the current research on Reconstructive and Oncoplastic Surgery in breast cancer treatment we would like to find new reconstructive surgery approaches, better ways of reducing symptoms and side effects of breast cancer treatments, socioeconomic burden of the disease to improve comfort and quality of life for Ukrainian patients.

References


