Inspiring art pieces and legendary stories for cancer patients and medical staff: experience from a single institution

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Abstract – Art therapy has gained recognition as a valuable approach to supporting cancer patients, contributing to the reduction of depressive symptoms and pain in many hospitals worldwide. However, incorporating artworks into hospital environments can be challenging, as these spaces are primarily designed with a focus on clinical services. In this article, we present the experience of a single institution, Sun Yat-sen University Cancer Center (SYSUCC), where two artworks pay homage to the legacy of Dr. Malcolm J. Simons. Dr. Simons was renowned as a “junk DNA genius”, who dedicated his career to human genetic data analyses and made groundbreaking discoveries regarding the correlation between human leukocyte antigen genes and the incidence of nasopharyngeal carcinoma. The artworks, skillfully crafted by Dr. Simons’ wife, Ann Abrahamsen, provide solace and healing for the many patients and family members that cross their path daily in SYSUCC. Promoting healing and well-being, they offer a short respite from the uncertainty for patients and loved ones undergoing cancer treatment.

Key words: Art therapy, Cancer, Tribute.

Introduction

Art therapy is a recent addition to healing that may seem at odds with the scientific method; however, research has shown that making artwork can help cancer patients, regardless of their artistic experience or ability [1]. Additionally, viewing and learning about artworks, known as art appreciation therapy, is also a powerful tool [2]. The benefits of both art-making and art appreciation cannot be understated, as studies have shown improvements in emotional distress, reduction in depressive symptoms, and cortisol reduction [3–6]. These benefits are not limited to patients alone but extend to family members as well, especially when they engage in art activities together [7].

Engaging in art-related activities and viewing artworks may also reduce and provide a valuable distraction from pain, allowing patients to focus their attention on creative expression and aesthetic experiences. Art therapy offers a non-pharmacological approach to pain management, complementing medical interventions and reducing reliance on medication alone [8]. The immersive nature of art can evoke positive emotions, promote relaxation, and foster a sense of psychological well-being [9]. Patients can find a therapeutic outlet through activities such as coloring, drawing, writing, singing, and dancing, enabling them to express emotions, explore their inner selves, and cultivate self-compassion, agency, and possibly resilience [10, 11]. Thus, art therapy becomes a medium through which patients can enhance their spiritual insight, cope with the challenges of illness and treatment, and promote mental and emotional well-being [12].

However, incorporating art and art activities into hospital environments can be challenging, as hospitals are often designed with a clinical focus, prioritizing medical services over aesthetic considerations. Yet, improving the hospital environment may be considered a crucial aspect of patient care, and the incorporation of art and art activities can significantly contribute to this goal. One benefit of hanging art pieces in a hospital environment is maximizing the visual space [13].

In this article, the experience of one of the top cancer centers in the world [14], Sun Yat-sen University Cancer Center (SYSUCC), highlights the importance of creating a healing environment for patients, families, and staff. It is the backstory of two artworks that pay tribute to Dr. Malcolm J. Simons, a renowned geneticist, and immunologist who made significant contributions to cancer research. These art pieces hold a deep personal connection as they reflect Dr. Simons’ legacy and the enduring impact he had on the field of medicine. As patients, family members, and staff encounter these artworks, they are reminded of the resilience and strength of individuals affected by cancer. The emotional resonance of these artworks extends beyond their aesthetic appeal, serving as powerful symbols of hope, healing, and the human spirit in the face of adversity.
Pillar of Life

Hanging in the quiet of one of Asia’s largest cancer radiation centers is Pillar of Life (Video 1). At 2.1 m wide and 10 m tall, the triptych canvas oil painting can be seen from everywhere in the room. A modern twist on the classic Chinese shan shui: water cascades from mountain tops, ruffled feathered white birds float upwards towards the sun through tree branches made from paper strips of genetic coding sequences of human leukocyte antigen (HLA) locus, while lavender-like flowers line the mountain tops against a vibrant backdrop of warming yellow. Together, these natural elements provide a sense of hope and life in a place of future uncertainties for those passing through its doors. Families, friends, and loved ones often sit, waiting pensively, staring at it, as if willing it on to help in their time of desperation (Figure 1).

Reading the plaque from the artists Ann Abrahamsen, Liao Wei-biao, Li Gui-shen, and Li Jun-qiang we begin to understand both the scientific and the personal elements of cancer that characterize Pillar of Life.

The trees represent the path of life reaching up towards the sun. The branches consist of small pieces of DNA sequence paper: the symbol of the code of life that is written in our genes, a necessary component of all life [...]. Like the torn paper, our lives can become ragged and torn when the diagnosis of cancer changes the lives of patients, their families and friends.

Dr. Malcolm J. Simons 1939–2012

The small pieces of torn DNA sequence paper (Figure 2) are from the work of Ann’s husband, Dr. Malcolm J. Simons, an internationally renowned geneticist, and immunologist, who spent his life tirelessly dedicated to improving the diagnosis of diseases, especially nasopharyngeal carcinoma (NPC) [15–17] (Video 2). Born in 1939 of Haka heritage in New Zealand, Malcolm was educated at the University of Otago, Dunedin, where he received his Bachelor of Medicine in 1962. He started his career at the Royal Children’s Hospital in Melbourne, Australia, working there from 1964 to 1970. Initially wanting to become a transplant surgeon, he quickly changed fields, deciding genetics “needed sorting out” according to Ann.

From 1970 to 1976 Malcolm was the head of the World Health Organization’s Immunology Research and Training Center for the Western Pacific and Southeast Asian region at the National University of Singapore. During that time, Malcolm was an advisor, teacher, and consultant. There he developed a radioimmunoassay form of blood donor screening and later, when HLA typing was established, he discovered a new HLA-B locus antigen: Singapore 2 (also known as Sin 2). It had a strong association with NPC which became a defining feature of his career. Malcolm was also involved in other breakthroughs at the time regarding hepatitis.

In 1979, Simons along with Dr. Brian Tait went to the then Zhongshan Medical College Institute of Oncology (now SYSUCC) to develop the first Tissue Typing (HLA) laboratory. Welcomed by the National Chinese Minister of Health, they were declared pioneers as part of the few scientists to come and work in China post the cultural revolution.

Jumping forward to 1989, Malcolm produced his most famous work, “junk DNA”. Initially met with skepticism, he was somewhat ridiculed for his idea that 95% of the non-coding elements of DNA were not junk at all. It began when he attended the 1987 International Histocompatibility Workshop at Princeton. The aim was to provide a DNA typing system using Restriction Fragment Length Polymorphism enzymes. He stayed after the workshop for 3 months to analyze the data. He discovered that the method was not only defining HLA alleles but it was also defining haplotypes. His analyses concluded that the polymorphic sites in the non-coding intron regions appeared to be ordered, not random, revealing that the introns...
could not possibly be junk as first thought. Today, these non-coding elements are seen as clues to understanding the susceptibility of diseases.

Between 1989 and the 2000s, Malcolm founded numerous businesses and opened one of the first private tissue laboratories in Australia. And in 2009, Simons attended Singapore for a conference on NPC, meeting SYSUCC Professors Joseph Wee and later Miles Qian. Both of whom were working on a hypothesis for the origins of NPC. In February 2010, a co-organized event by Simons and Wee went ahead on the genetic aspects of NPC at the National Cancer Center of Singapore with the world’s leading experts on hand. Soon after, Simons took up the role of adjunct professor at SYSUCC (Figure 3).

In 2011, Simons helped organize a special issue for the Chinese Journal of Cancer (now Cancer Communications) from the Singapore lectures (Figure 4). The issue covered incidence patterns, early detection among high-risk populations, and the role of genetic technologies. Simons wrote the editorial: Nasopharyngeal carcinoma as a paradigm of cancer genetics [15] and co-authored two more pieces. Ann also produced a portrait of Malcolm for the cover of the journal.

A former colleague and current Principal Investigator Prof. Jin-Xin Bei of SYSUCC said Malcolm’s ideas around NPC were to separate chromosomes from males and females and to sequence them independently to extend our knowledge of genetics in the haplotype region. To simplify, obtaining and isolating these haplotype sequences, according to Malcolm, could potentially lead us to an evaluation of the susceptibility of associated risk. Meaning the testing of genes could identify a scale of risk and therefore potential mitigation in the future. Malcolm and others committed to this project at SYSUCC pursuing and conducting many experiments.

Sadly, Malcolm was unable to see the project through to the end. At that time, he had already been defying the odds with his own personal battle with cancer, to which he would allow little sympathy according to those who knew him well. He passed away from myeloma in January 2012 aged 73. Treatment for multiple myeloma then, as still is the case, is limited and notoriously difficult to treat. Malcolm had an eleven-year fight of which few could have held on for so long. This is a testament to the human spirit of Malcolm evident in his continued work with SYSUCC right up until his death. When Malcolm passed away, the work was to continue. Unfortunately, recent developments in technology have stalled and further analyses have failed to garner results. Yet, Malcolm and his ambitious ideas remain at the forefront of those trying to unravel the complexities and challenges that encompass NPC.

More than One Wisdom

Another artwork created by Ann hangs on the first floor of the main building at SYSUCC. Hidden under the archways of the escalators, it is a relatively modest piece in terms of size when compared to the canvas tablets of the radiation center. Yet, its dwarfism does little to compromise the power of its aura. At first, what appears to be little more than a hanging to cover the clinical emulsion tiled walls; looking deeper, it represents a fusion that is reflective of Malcolm’s work and collaboration with SYSUCC (Figure 5).

Made from a variety of Traditional Chinese Medicine, Western Medicine, along with more paper strips of Malcolm’s genetic coding, it is a medical amalgam. Again, a natural motif is chosen. A blossoming tree and a lake studded with flowers made from cardboard medicine boxes make up the piece along with marching cicadas, trails of ligustrum lucidum, and dendrobium, which delicately form pathways around the artwork.

The painting bears two related Chinese expressions, which literally translate as cancer prevention from healthy living (lower sentence) and a multi-disciplinary approach to achieving the best outcome (upper sentence). These are both salient points...
Figure 3. A security guard looks on from the third floor of SYSUCC’s radiation center.

Figure 4. The cover of the Chinese Journal of Cancer’s (now Cancer Communications) special edition.
and something Malcolm’s legacy and collaboration symbolize: if we are to truly beat cancer it cannot be achieved alone.

The initial thoughts for improving the medical environment for cancer patients, families, and staff with art pieces such as these paintings have worked well and show SYSUCC’s commitment to improving patient care, as it has emerged as one of the top cancer centers in the world [14]. Inspired by these two artworks, more art now hangs in SYSUCC.

Future directions

The narrative presented in this article lays the groundwork for the development of more unique art therapy approaches in the future. By highlighting the integration of art therapy and paying tribute to Dr. Malcolm J. Simons at SYSUCC, it offers a foundation for improving patient care, as it has emerged as one of the top cancer centers in the world [14]. Inspired by these two artworks, more art now hangs in SYSUCC.

Video 1. Pillar of Life inside Sun Yat-sen University Cancer Center’s radiation center. https://vcm.edpsciences.org/10.1051/vcm/2023004#V1.


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Conflict of interest

The author declares that he has no conflict of interest in relation to this article.
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