

Cancer Association of South Africa (CANSA)



CANSA Fact Sheet on Cancer Survivorship

Introduction

The term 'cancer survivor' means different things to different people. For some, the term refers to anyone who has been diagnosed with cancer; others consider a cancer survivor to be anyone who has completed active treatment and is free of any signs of disease.

[Picture Credit: Survivor]



The Cancer Association of South Africa (CANSA) defines a 'cancer survivor' as any person who has been told that he/she has cancer and remains a cancer survivor until he/she dies of whatever cause.

At the end of active treatment, many survivors often have mixed emotions, including relief that their treatment is over, as well as anxiety about the future. After treatment, the 'safety net' of regular, frequent contact with the health care team ends. Some survivors may miss this source of support, especially because anxieties may surface at this time. Others may have physical problems, psychological problems, sexual problems, and fertility concerns. Many survivors feel guilty about surviving, having lost friends or loved ones to the disease. Some survivors are uncertain about their future, while others experience discrimination at work or find that their social network feels inadequate.

Phases of Cancer Survivorship

According to the MD Anderson Cancer Center, cancer survivorship has three distinct phases, namely: living with, through, and beyond cancer.

Living with cancer - refers to the experience of receiving a cancer diagnosis and any treatment that may follow. During this time:

- Survivors will undergo treatment and/or may be asked to join a clinical trial to study new cancer therapies.

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[D Litt et Phil (Health Studies); D N Ed; M Art et Scien; B A Cur; Dip Occupational Health; Dip Genetic Counselling; Dip Audiometry and Noise Measurement; Diagnostic Radiographer; Medical Ethicist]

Approved by Ms Elize Joubert, Chief Executive Officer [BA Social Work (cum laude); MA Social Work]

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- Survivors and their caregivers may be offered services to help cope with emotional, psychological and financial concerns.

Living through cancer - is the period following treatment in which the risk of cancer recurring is relatively high. Many survivors are relieved that treatment is over, but anxious about no longer seeing their cancer doctor on a regular basis.

During this stage:

- Survivors typically see their cancer doctor two to four times a year depending on their circumstances.

Living beyond cancer - refers to post-treatment and long-term survivorship. While two out of three survivors say their lives returned to normal, one-third reported continuing physical, psychosocial or financial consequences.

During this stage:

- Most survivors go back to the care of their primary physician
- Ideally, survivors will have developed a long-term health care plan with their cancer doctor to be implemented by their primary physician

More and more people every day are surviving cancer. The following are some of the survivorship issues that affect cancer survivors:

Incidence of Cancer in South Africa

According to the outdated National Cancer Registry (2019), known for under reporting, the following number of cancer cases was histologically diagnosed in South Africa during 2019:

Group - Males 2019	Actual No of Cases	Estimated Lifetime Risk
All males	41 513	1:6
Asian males	1 055	1:7
Black males	14 461	1:9
Coloured males	4 809	1:5
White males	21 188	1:4

Group - Females 2019	Actual No of Cases	Estimated Lifetime Risk
All females	43 860	1:8
Asian females	1 363	1:7
Black females	1 849	1:11
Coloured females	4 884	1:7
White females	17 764	1:4

The frequency of histologically diagnosed cases of cancer in South Africa for 2019 was as follows (National Cancer Registry, 2019):

Group - Males 2019	0 – 19 Years	20 – 29 Years	30 – 39 Years	40 – 49 Years	50 – 59 Years	60 – 69 Years	70 – 79 Years	80+ Years
All males	511	602	1 864	3 823	8 235	12 287	10 215	3 976
Asian males	13	19	49	100	209	353	245	67
Black males	405	375	1 113	1 793	3 351	4 219	2 487	718
Coloured males	33	48	164	432	1 056	1 498	1 150	428
White males	60	160	538	1 498	3 619	6 217	6 333	2 763

Group - Females 2019	0 – 19 Years	20 – 29 Years	30 – 39 Years	40 – 49 Years	50 – 59 Years	60 – 69 Years	70 – 79 Years	80+ Years
All females	501	1 073	4 413	7 421	8 821	10 040	7 664	3 927
Asian females	12	28	105	215	284	378	263	78
Black females	190	740	1 927	4 507	4 251	3 859	2 064	901
Coloured females	38	89	336	702	1 154	1 258	874	433
White females	74	216	822	1 997	3 132	4 545	4 463	2 515

N.B. In the event that the totals in any of the above tables do not tally, this may be the result of uncertainties as to the age, race or sex of the individual. The totals for 'all males' and 'all females', however, always reflect the correct totals.

Possible Side Effects of Cancer Treatment

Not everyone experiences side-effects in the same way. Side-effects depend on:

- the part of the body being treated
- the type of treatment given, e.g. radiotherapy, chemotherapy, hormone therapy, targeted therapy, biologic therapy, immunotherapy, etcetera

Most effects that survivors may experience are normal. The treating doctor or professional nurse will be in a position to inform survivors of what can be expected from a particular treatment.

Please refer to the following two (2) Fact Sheets for information:

- CANSA Fact Sheet on Chemotherapy
- CANSA Fact Sheet on Radiation Therapy

Both these Fact Sheets are available on the CANSA website at www.cansa.org.za

On the landing page of the CANSA Website, go to the Research platform and find "Fact Sheets".

Other Fact Sheets that are available on the CANSA Website on specific types of cancer should also be consulted. They can be viewed at www.cansa.org.za

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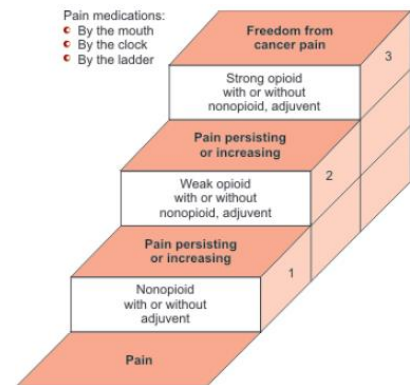
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Treating Cancer Pain

Up to 5 in 10 people who have treatment for cancer (50%) have some pain. When cancer has come back or spread, about 7 in 10 people (70%) have pain. If one has pain, it is important to tell one's doctor and nurse so they can treat it.

Some people may not want to talk about their pain as they feel they are complaining. But the earlier treatment is given for pain, the more effective it is.

The way people feel and experience pain varies. Even people with the same type of cancer can have very different experiences.



[Picture Credit: WHO Pain Relief Ladder]

The amount of pain one has is not necessarily related to how severe the cancer is. Having pain does not always mean that the cancer is advanced or more serious. Pain does not always get worse as the cancer develops. It is important to remember that cancer pain can almost always be reduced.

Pain is an uncomfortable, unpleasant physical sensation as well as an emotional experience. It happens when parts of the body are damaged. This damage irritates nerve endings, which then send a warning signal to the brain. The brain responds by making one feel pain or discomfort.

Pain is not only a physical sensation. Emotions can make the pain better or worse. If one is anxious, one may feel more pain, and if one is relaxed, one may feel less pain. Persons suffering from cancer pain should not hesitate to consult a medical practitioner about their cancer pain and treatment thereof.

There are individuals who claim that recent advances in the availability of medicinal marijuana has greatly increased the capacity to effectively treat severe cancer pain that does not respond to traditional treatment. However, marijuana is still illegal in South Africa and medicinal marijuana is still not legally available locally.

Cognitive Changes Following Cancer Treatment

'Chemo brain' is a common term used by cancer survivors to describe thinking and memory problems that can occur after cancer treatment. Chemo brain can also be called chemo fog, chemotherapy-related cognitive impairment or cognitive dysfunction.

Though chemo brain is a widely used term, it is misleading. It is still not altogether clear that chemotherapy is the sole cause of concentration and memory problems in cancer survivors.

Despite the many questions, it is clear that the memory problems commonly called chemo brain can be a frustrating and debilitating side effect of cancer and its treatment. More study is needed to understand this condition.

Signs and symptoms of chemo brain may include:

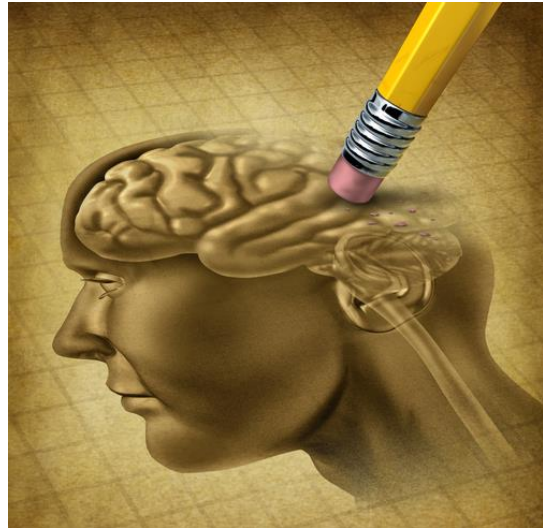
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- Being unusually disorganised
- Confusion
- Difficulty concentrating
- Difficulty finding the right word
- Difficulty learning new skills
- Difficulty multitasking
- Fatigue
- Feeling of mental foginess
- Short attention span
- Short-term memory problems
- Taking longer than usual to complete routine tasks
- Trouble with verbal memory, such as remembering a conversation
- Trouble with visual memory, such as recalling an image or list of words



[Picture Credit: Chemo Brain]

It is still not altogether clear what causes signs and symptoms of memory problems in cancer survivors.

Cancer-related causes could include:

- Cancer treatments
 - Chemotherapy
 - Hormone therapy
 - Immunotherapy
 - Radiation therapy
 - Stem cell transplant
 - Surgery
- Complications of cancer treatment may include
 - Anaemia
 - Fatigue
 - Infection
 - Menopause (associated with hormone therapy)
 - Nutritional deficiencies
 - Sleep problems, such as insomnia
- Emotional reactions to cancer diagnosis and treatment
 - Anxiety
 - Depression
- Other causes
 - Inherited susceptibility to chemo brain
 - Medications for other cancer-related signs and symptoms, such as pain medications

When to see a doctor - If a cancer survivor experiences troubling memory or thinking problems, he/she must make an appointment with his/her doctor. Keep a journal of signs and symptoms so that the doctor can better understand how memory problems are affecting everyday life.

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No standard treatment has been developed for cancer-related memory problems. Because symptoms and severity differ from person to person, one's doctor can work with one to develop an individualised approach to coping.

Controlling other causes of memory problems - cancer and cancer treatment can lead to other conditions, such as anaemia, depression, sleep problems and early menopause, which can contribute to memory problems. Controlling these other factors may make it easier to cope with these symptoms.

Learning to adapt and cope with memory changes - a neuropsychologist, who specialises in diagnosing and treating conditions that affect memory and thinking, can create a plan to help one cope with chemo brain symptoms. Doctors sometimes refer to this as cognitive rehabilitation or cognitive remediation.

Learning to adapt and cope with memory changes may involve:

Repetitive exercises to train one's brain - memory and thinking exercises may help the brain repair broken circuits that may contribute to chemo brain.

Tracking and understanding what influences memory problems - carefully tracking memory problems may reveal ways to cope. For instance, if one tends to become more easily distracted when hungry or tired, one could schedule difficult tasks that require extra concentration for the time of day when one feels at one's best.

Learning coping strategies - one may learn new ways of doing everyday tasks to help one concentrate. For instance, one may learn to take notes or make an outline of written material as one reads. Or a therapist may help one to learn ways of speaking that helps one commit conversations to memory and then retrieve those memories later.

Stress-relief techniques - stressful situations can make memory problems more likely. And having memory problems can be stressful. To end the cycle, one may learn relaxation techniques. These techniques, such as progressive muscle relaxation, may help one identify stress and help one cope.

Medications - no medications have been approved to treat chemo brain. But medications approved for other conditions may be considered.

Medications that are sometimes used in people with these symptoms include:

- Methylphenidate (Concerta, Ritalin, others), a drug used to treat attention-deficit/hyperactivity disorder (ADHD)
- Donepezil (Aricept), a drug used in people with Alzheimer's disease
- Modafinil (Provigil), a drug used in people with certain sleep disorders

More study is needed to understand how, or if, these drugs may be helpful for people with these types of memory problems.

Avoid Risky Behaviours

Avoid risky behaviours that can lead to infections that, in turn, may increase the risk of cancer.

For example:

- Practice safe sex. Limit the number of sexual partners, and use a condom when having sex. The more sexual partners, the more likely one is to contract a sexually transmitted infection — such as Human Immunodeficiency Virus (HIV) or Human Papilloma Virus (HPV). People who have HIV or Acquired Immune Deficiency Syndrome (AIDS) have a higher risk for cancer of the anus, cervix, lung and immune system. HPV is most often associated with cervical cancer, but it may also increase the risk for cancer of the anus, penis, throat, vulva and vagina.



[Picture Credit: Condom]

- Do not share needles with anyone. Sharing needles with other persons can lead to HIV, as well as hepatitis B and hepatitis C — which can increase the risk of liver cancer (Mayo Clinic).

Spirituality

Religious and spiritual values are important to people who are coping with cancer. Spirituality may be defined as an individual's sense of peace, purpose and connection to others, as well as beliefs on the meaning of life. This may be found and expressed through an organised religion or in other ways.

[Picture Credit: Prayer]



Research shows that things such as positive beliefs, comfort and strength gained from religion, meditation and prayer can contribute to healing and a sense of well-being. Improving one's spiritual health may not cure an illness, but it may help one feel better, prevent some health problems and help one cope with illness, stress or death.

Ikharo, E., Gondwe, K.W., Conklin, J.L., Zimba, C.C., Bula, A., Jumbo, W., Wella, K., Mapulanga, P., Idiagbonya, E., Bingo, S.A.M., Chilemba, E., Hotchkiss, J., Montano, N.P., Qan'ir, Y., Song, L. & Leak Bryant, A. 2023.

Objective: To synthesize and examine current literature on survivorship experiences and psychosocial oncologic care programs of individuals affected by cancer in sub-Saharan Africa (SSA).

Methods: This was a systematic review guided by the PRISMA 2020 guidelines. We searched 6 databases for articles published from inception to 21 October 2021. Articles were appraised using the Johanna Briggs Institute's Checklist for Qualitative Research. For data synthesis, we used the World Health Organization (WHO) quality of life framework [WHOQOL] to organize experiences into 6 domains/themes.

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Results: Twenty-five qualitative studies were included in the synthesis. Studies focused on psychosocial care of adults (>18 years) affected by cancer in SSA. The common WHOQOL domains were social relations, spirituality/religion/personal beliefs, and psychological.

Conclusion: Findings echo need for individuals with cancer and their caregivers. Healthcare professionals are an essential resource for information and support services that can be tailored to individuals need. This synthesis highlighted caregiver stress and stressors from the community that could impact care of individuals with cancer. A holistic approach is needed that incorporates professional and social aspects of care.

Mercier, M., Maglio, J., Almhanna, K. & Guyer, D. 2023.

Background and objective: Spirituality is an essential part of being human and spiritual needs are common among patients with serious illness. We will show 'Why' an interdisciplinary approach to spiritual care in adult oncology is the most effective way to support patients' spiritual needs. We will articulate 'Who' from the treatment team should provide spiritual support. We will review a means of 'How' the treatment team can provide spiritual support through being attentive to the spiritual needs, hopes, and resources of adult patients with cancer.

Methods: This is a narrative review. We conducted an electronic PubMed search from 2000-2022 using the following sets of terms: Spirituality, Spiritual Care, Cancer, Adult, Palliative Care. We also incorporated case studies as well as the experience and expertise of the authors.

Key content and findings: Many adult patients with cancer report spiritual needs and a desire for the treatment team to address their spiritual needs. Addressing the spiritual needs of patients has been shown to be beneficial. Yet, the spiritual needs of patients with cancer are infrequently addressed in medical settings.

Conclusions: Adult patients with cancer experience a range of spiritual needs throughout the disease trajectory. Best practice dictates the interdisciplinary treatment team should address the spiritual needs of patients with cancer through a generalist and specialist spiritual care model. Addressing spiritual needs helps patients maintain hope, assists clinicians in sustaining cultural humility during times of medical decisionmaking, and promotes well-being among survivors.

Emotional and Mental Health

The following may assist in maintaining a balance as far as emotional and mental health is concerned:

- *Build confidence* – identify abilities and weaknesses together, accept them and build on them. Do the best with what is available
- *Make time for family and friends* - these relationships need to be nurtured. If taken for granted family and friends will not be there to share life's joys and sorrows
- *Give and accept support* - friends and family relationships thrive when they are 'put to the test'
 - [Picture Credit: Mental Health]
- *Manage stress* - all may have stressors in their lives but learning how to deal with them when they threaten to overwhelm one may maintain one's mental health



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- *Find strength in numbers* - sharing a problem with others who have had similar experiences may help find a solution and may make one feel less isolated
- *Identify and deal with moods* - all need to find safe and constructive ways to express one's feelings of anger, sadness, joy and fear
- *Learn to be at peace with yourself* - get to know who you are, what makes you really happy, and learn to balance what you can and cannot change about yourself (Canadian Mental Health Association)
- *Volunteer* - being involved in one's community may give one a sense of purpose and satisfaction that paid work cannot. Become a CANSA Volunteer. Contact CANSA on the toll free number 0800 22 66 22 or visit the CANSA Website www.cansa.org.za

For additional information, please refer to the following Fact Sheet that is available on the CANSA Website at www.cansa.org.za:

- FCANSA act Sheet on Cancer and Mental Health.

Hu, S., Baraghoshi, D., Chang, C.P., Rowe, K., Snyder, J., Deshmukh, V., Newman, M., Fraser, A., Smith, K., Peoples, A.R., Gaffney, D. & Hashibe, M. 2023.

Background: Ovarian cancer is the fifth most common female cancer in the United States. There have been very few studies investigating mental health diagnoses among ovarian cancer survivors with long-term follow up. The aim of this study is to examine the incidence of mental illness among ovarian cancer survivors compared to a general population cohort. A secondary aim is to investigate risk factors for mental illnesses among ovarian cancer survivors.

Patients and methods: Cohorts of 1689 ovarian cancer patients diagnosed between 1996 and 2012 and 7038 women without cancer matched by age and birth state from the general population were identified. Mental health diagnoses were identified from electronic medical records and statewide healthcare facilities data. Cox proportional hazard models were used to estimate hazard ratios (HRs).

Results: Ovarian cancer survivors experienced increased risks of mental illnesses within the first 2 years after cancer diagnosis (HR = 3.55, 95% CI = 3.04-4.14). The risks of depression among ovarian cancer survivors were nearly 3-fold within the first 2 years of cancer diagnosis (HR = 2.59, 95% CI = 1.94-3.47), and 1.69-fold at 2-5 years after cancer diagnosis (HR = 1.69, 95% CI = 1.18-2.42). Ovarian cancer survivors experienced an 80% increased risk of death with a mental illness diagnosis (HR = 1.80, 95% CI = 1.48-2.18) and a 94% increased risk of death with a depression diagnosis (HR = 1.94, 95% CI = 1.56-2.40).

Conclusions: Higher risks of mental illnesses were observed among ovarian cancer survivors throughout the follow-up periods of 0-2 years and 2-5 years after cancer diagnosis. Multidisciplinary care is needed to monitor and treat mental illnesses among ovarian cancer survivors.

Conflict of interest statement

The authors declare no potential conflicts of interest.

Depression

Depression is a disorder characterised by feeling down, depressed, or sad - having little interest or receiving little pleasure in doing things, and feeling hopeless. These feelings often persist for two or

more weeks and negatively affect a person's daily activities or relationships. The symptoms of depression may appear shortly after diagnosis or anytime during or after treatment.

People are more likely to experience depression during or after cancer if they have been diagnosed with depression in the past, have close family members with depression, have significant anxiety and worry, are facing cancer alone or without the support of friends or family, or have financial burdens.

Although depression is more common among people with cancer, it should not be considered a normal part of living with cancer. Depression lowers a person's quality of life, undermining the emotional and physical strength often required to undergo cancer treatment. It may also interfere with a person's ability to make choices about cancer treatments. Identifying and then managing depression are important parts of coping with cancer.

Nakhband, A., Farahzadi, R., Saeedi, N., Barzegar, H., Montazersaheb, S. & Soofiyan, S.R. 2023.

“Epidemiological evidence continues to accumulate on the effect of stress and depression on cancer initiation and progression. Depression has been introduced as an independent predictor of increased cancer mortality. At the same time, early intervention for depression increases the survival rate. Even some evidence has given prognostic value for depression to predict cancer recurrence and mortality. This article presents current evidence on the correlations of molecular mechanisms of cancer and depression through; I. The evidence shows the role of pre-existing depression and anxiety in the development and progression of cancer. II. The Immune system performs a crucial role in stress, depression, and cancer. III. The role of stress and depression-induced inflammation. IV. The evidence has proposed that cancer may result in depression and the effect of depression on cancer outcomes. In conclusion, the importance of preventive interventions to monitor patients' mental health during cancer treatment is very significant and should not be underestimated. In other words, the initial interventions can improve depressive symptoms and increase cancer survival. On the other hand, by identifying key biomarkers of depression, physicians can identify cancer patients at risk for depression or those who may not respond to routine treatments. Revealing the molecular mechanism of the cancer microenvironment in the development of comorbidities promises innovative therapeutic options for cancer. Identifying these mechanisms opens a new avenue in identifying cancer patients at risk for depression and can also provide considerable potential in identifying depressive patients prone to cancer.”

For additional information, please refer to the following Fact Sheet that is available on the CANSA Website at www.cansa.org.za:

- CANSA Fact Sheet on Cancer and Mental Health.

Returning to Work

Once one's cancer treatment is complete or nearing completion and one has been cleared to return to work, at least part-time, more challenges may await. After using up medical leave, gear up for the next challenge: making a re-entry to working life as comfortable as possible.



[Picture Credit: Returning to Work]

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For many cancer survivors, thinking about returning to work often brings mixed emotions: relief, trepidation, hope - and perhaps awkwardness. Even if one is sure of being ready to return, there may still be some worries: Will there be scepticism or support?

Here are some suggestions for smoothing the transition from cancer patient back to being a valued employee and cancer survivor:

- It is important to test one's psyche - just as important as feeling capable of doing the job is feeling psychologically up to speed. If feeling below par, it may be advisable to seek one-on-one counselling from a social worker or a therapist, or to join a support group of other cancer survivors returning to work
- Evaluate readiness to work – is there an intention to return full-time or part-time? If part-time sounds more feasible, consider what accommodations may be needed. Do mornings work better, or afternoons? Take into account any medications and their possible side effects
- Attend workshops or seminars to refresh skills
- Attend industry events to keep knowledge up-to-date
- Focus on the work itself, even if catching up means tending to tedious tasks such as returning a boatload of telephone calls or tackling a mountain of mail. It is important to resume routine

Fertility

Chemotherapy, radiation, and surgery all can have lasting effects on reproductive health. Risk depends on the diagnosis, the type of treatment, and the dose of treatment - higher doses are more likely to lead to infertility. Even an experienced doctor cannot accurately predict with 100% certainty what the lasting effects may be.

It is crucial to discuss matters around fertility with a health professional before any cancer treatment is commenced with. Aspects to include in the discussions:

- In vitro fertilisation
- Ovarian tissue freezing
- Embryo banking
- Freezing and storing sperm

In general:

- Some chemotherapy drugs are more likely to lead to infertility than others. The high-risk drugs most likely to affect reproductive organs are Cytoxan (known generically as cyclophosphamide), Ifosfamide, Procarbazine, Busulfan, and Melphalan. Others, like vincristine and methotrexate, are typically less likely to harm fertility. Some of these drugs also may interrupt menstruation in girls and/or cause early menopause.



[Picture Credit: Fertility]

- Radiation treatments can damage testes or ovaries. If radiation is focused on or near the pelvic area, abdomen, spine, and/or the whole body, it may cause damage to sperm or eggs. Also, radiation to the abdomen, pelvic area, or entire body may affect a girl's uterine function and cause difficulty in carrying a baby to full term. It also can interrupt menstruation in girls or reduce sperm count and motility in boys - these conditions may be permanent or may reverse after the treatment. Children who have radiation to certain areas of the brain also may have their fertility affected.
- If the cancer involves the reproductive organs, surgery might be recommended and doctors might need to remove part of the reproductive organs to remove the cancer.

For more information, kindly read the CANSA Fact Sheet on Contraceptive Choices and Fertility Options for Women Diagnosed with Breast Cancer.

Alur-Gupta, S., Fruchtman, H. & Paroder, V. 2023.

“Fertility preservation is becoming an integral part of cancer care among women of reproductive age. Despite advances in the treatment of pelvic malignancies, all the currently available treatment approaches, including radiotherapy, chemotherapy, and surgery, place women at high risk for future fertility impairment. With improved long-term survival rates associated with cancer, expanding the reproductive options available is of high priority. Several fertility preservation options are available today for women with gynecologic and non-gynecologic malignancies. Depending on the underlying oncological entity, these can include the following procedures whether alone or in combination: oocyte cryopreservation, embryo cryopreservation, ovarian tissue cryopreservation, ovarian transposition, and trachelectomy. The purpose of this review is to provide the most up-to-date information on the aforementioned fertility-preserving approaches and highlight the current challenges, drawbacks, and areas of research where more data are still very necessary to optimize outcomes in young female oncological patients desiring pregnancy in the future.”

Improving Quality of Life

The following actions may be helpful in improving quality of life:



[Picture Credit: Quality of Life]

- Take one day and make one decision at a time - try to focus on only resolving today's problems. Avoid projecting worst-case scenarios for the

future. Taking one small step at a time can help one feel less vulnerable and give one a greater sense of control.

- Accept that some things may be out of one's control - focus on those things that can be controlled and take action on those instead.
- Ask for support - be open with family and friends about feelings and how they can be of support. Offer specific examples, such as: being driven to appointments, researching sources for financial support, or just listening. It is also good practice to take someone with to medical appointments to take notes and help one remember instructions and information.
- Communicate with the whole healthcare team - prepare a list of questions for each appointment. If something is not understood, ask for clarification. Ask to see X-rays or scans to get a better picture of what is going on. If there are problems to develop a good relationship with a particular doctor, consider finding another. In general, it is useful to get a second opinion on one's diagnosis and treatment to feel more confident about next steps.
- Retain as much control of one's life as is reasonable - having cancer can make it difficult for one to feel in charge of one's life and care. Work with the doctor, nurse, and caregiver to develop a plan that gives as much control over one's own life as desired and comfortably handled.
- Acknowledge and express one's feelings - a diagnosis of cancer can trigger many strong emotions. Take time to listen to yourself. Find constructive ways to express feelings through writing, talking, physical activity or creative pursuits. Consider professional support when there is a feeling that depression or anxiety may hamper the ability to function well.
- Seek support from other cancer survivors - people often find a sense of comfort when they communicate with others affected by cancer. Contact the Cancer Association of South Africa (CANSA) or ask the treating doctor, nurse, or social worker about local support groups.
- Set aside 30 minutes every day for self — discover new ways to bring happiness and contentment into every day.
- Learn relaxation techniques – 'relaxation' refers to a calm, controlled physical state that enhances one's well-being. Relaxation is something that one might have to learn, or build it into every day. This is important to do. Consider music that makes one happy, reading a book, or taking a walk. Yoga, tai-chi, or meditation programmes may also be helpful. Take time to enjoy every moment.
- Do only what is enjoyable - try to find humour in the unexpected moments of each day. Consider activities that can be enjoyed and that can be done comfortably. If there is a need to spend time alone, allow yourself exactly that.
- Be open to one's own emotions — don't be afraid to feel both negative and positive emotions.

- Take action to reduce stressors — chronic stress will not help the situation. Explore relaxation and stress relief strategies such as exercise, Tai Chi, yoga, meditation or expressive writing or art.
- Make healthy lifestyle choices – it is never too late to make changes that will absolutely improve one’s well-being. Improving one’s diet, including exercise, and maintaining intimacy are all ways of feeling better both physically and emotionally.
- Try something new - maybe starting a herb garden, growing orchids, taking a cooking class or learning to dance.
- Maintain a spirit of hope - hope is desirable and reasonable. Even if one’s cancer journey is complicated, one can still set small goals and enjoy daily pleasures. It may be necessary to redefine how, and when, hope is experienced by focusing on one’s own spiritual beliefs, cultural customs, and family connections.

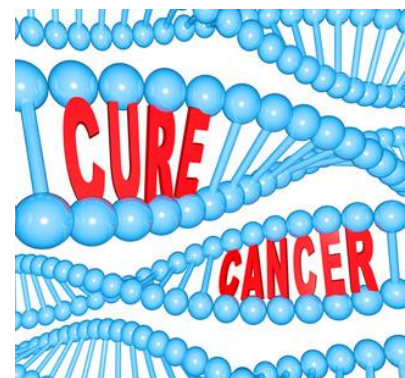
Find a new ‘normal’ - the idea is to find a new ‘normal’ and embrace it. Do not look back, but remember what brought happiness and recognise any new limitations.

Understanding Recurrence

It can be extremely difficult to live with the fact that one’s cancer may come back. Even if told by doctors that they are 95% certain the cancer has gone for good, it may be very upsetting that no one can say "Yes, the cancer is cured". Some people find they cannot stop thinking about having had cancer, even though they expected to put it behind them once their treatment had finished. Many individuals may feel a little frightened of planning anything in the future or may feel sad or depressed.

For most people who are in this situation, each day lowers the risk of a recurrence. Most cancers that are going to come back will do so in the first two years after treatment. After five years one is even less likely to get a recurrence. For some cancers, after 10 years the doctor may say that such an individual is finally and totally in remission!

[Picture Credit: Recurrence vs Cure]



Unfortunately, some types of cancer can come back many years after they were first diagnosed. If someone finds it hard to get over having had cancer he/she may find it helpful to talk to other people in the same situation or to a trained counsellor. This can help him/her to find ways of dealing with the fear and worry. It may be helpful to contact the nearest CANSA office where information or counselling is offered.

Cancer may come back some time after its initial treatment. This idea can be frightening. There are a number of different explanations for why cancer might come back.

The main reasons are that some cancer cells may have:

- been left in the body where the original cancer was

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- spread to other parts of the body and gradually grown to form a new tumour

Cancer can come back after surgery because:

- there were cancer cells left behind during the operation
- some cancer cells had broken away from the primary cancer before the operation and spread to elsewhere in the body

Surgeons do their best to make sure that all the primary cancer is removed. But no medical scan has been invented that can pick up one cell, or small groups of cells that have spread. Most surgeons can provide an educated guess about whether the cancer is likely to have been cured by surgery. Adjuvant treatment can also be given to try to kill any cells that may have escaped.

Cancer cells are killed by chemotherapy drugs because these drugs attack cells that are in the process of doubling to form two new cells. Cells that are actively dividing are also more vulnerable to radiation, although it is not fully understood why this is - so radiotherapy works by killing dividing cells too.

Not all the cells in a cancer will be dividing at the same time. Normal cells go into a long rest period between divisions. Cancer cells do too, although the rest period may be much shorter. Giving chemotherapy and radiotherapy in a series of treatments helps to catch as many cells dividing as possible and so kill them. Hopefully, cells that were resting during the first treatment will be active during the next treatment and so will be more likely to die.

It is unlikely that any cancer treatment will kill every single cancer cell in one's body. To do that, the treatment would have to be very strong and would have too many dangerous side effects. What doctors are trying to do is to reduce the numbers of cancer cells to the extent that there are too few cells left for the cancer to survive. They hope the remaining cells will be killed off by the body's own defences - or will just die off naturally, as many cancer cells do when they leave the primary tumour.

Treating doctors will want to give each patient as much treatment as they can. But they cannot give more than what is safe. All treatments have a safe limit. One can only have up to a certain amount of radiotherapy to any particular part of the body. If one has more, then normal body tissue will be too damaged to repair itself.

Chemotherapy drugs have their limits too. Some can cause problems with the heart, liver, lungs or kidneys, so the dosage has to be carefully calculated.

Cure or Remission?

These days many cancers are cured. But some cancers can come back many years after they have first been treated. So, one may find that doctors are very unwilling to use the word 'cure' even though there is no sign that there is any of the cancer left. The cancer will be said to be in 'remission'. This means there is no sign of cancer left in the body.

If there are any cancer cells left:

- there are too few to find
- there are too few to cause any symptoms
- the cells may be in an inactive state
- the cells are not growing

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- the cells are not multiplying out of control

Many patients may be on some type of long-term treatment to try to keep any remaining cancer cells in an inactive state - for example, hormonal therapy for breast cancer. Being on this type of long-term treatment does not mean that the cancer is definitely still there.

When Cancer Does not Go Away – What Then?

Adults and children react differently when informed that their cancer or the cancer of someone they love will not go away or has recurred.

How adults may react

- If told that the cancer is advanced, an adult may suddenly confront challenging emotional issues and the possibility of death. He/she might feel strong emotions, such as fear, anger, guilt, loneliness or denial.
- Many people say that the news of advanced cancer is more devastating than the original diagnosis. Anxiety and depression are common and it can be harder to cope emotionally.
- The person may be worried about the impact of the cancer on his/her family. Some people avoid talking about the advanced cancer because they do not know what to say. However, people with advanced cancer who express their emotions and communicate with family and friends may find it easier to cope.
- For some people, faith and spiritual beliefs can help them get through tough times. For others, cancer can test their beliefs. Either way, every individual may find it helpful to talk to a spiritual adviser.

How children may react

- If the cancer has advanced, it is important to keep talking with the affected child. Again, just as with the diagnosis, children may sense that something is happening, and not telling them can add to their anxiety and distress.
- How a child may react to a diagnosis of advanced cancer can affect how the whole family adjusts. If the affected child is anxious and depressed, the family may be too.
- Some studies of children with advanced cancer show that family members often feel more distressed than the child affected by cancer. This seems to be more common where there is a lack of communication.
- When children find out that the cancer is advanced, they may have similar but more intense reactions than when they found out about the original diagnosis. They are likely to feel insecure, although teenagers may not want their loved ones to see this. Depending on their age, children usually have different immediate concerns when they hear the news.

What to tell children of cancer survivors

Preparing children for the loss of a parent, brother or sister, or someone very close to them, is an incredibly hard thing to do. The following is a guide on how to approach the initial conversation.

Be honest and open - once children know the cancer has advanced, they will need to be given some kind of an idea about what this may mean, in terms of the outcome (prognosis). With some cancers,

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the prognosis is fairly clear and people will know that they may only have months to live. However, more and more people with advanced disease are surviving for a longer time, sometimes for many years.

If death is likely in the short term, it is best to be as honest as one can be. If one needs to talk about oneself or one's partner, this can be an especially hard thing to do. One does not need to do it on one's own: social workers and other health professionals at the cancer treatment centre or the palliative care service can help one tell one's children.

Being open about death gives the survivor as well as the family the chance to show and say how much they care for each other, as well as the opportunity to work on unresolved issues. The chance to talk through old arguments and make amends seems to be particularly important for older children.

Use words they can understand - terms such as 'passed away', 'passed on', 'lost', 'went to sleep', 'gone away' or 'resting' can be confusing for children. It is usually best to use straightforward language. This includes using the words 'dying' or 'death'.

Tell them what to expect - prepare children by explaining how the illness might affect the patient in the days ahead. For example, the patient might be sleepy or need a lot of medicine.

Wait for the child to ask - give brief answers to questions they ask. It usually does not help to offer lots of explanations if the child is not ready to hear them.

[Picture Credit: Beads of Hope Canada]



Balance hope with reality - parents worry that if they talk about the death they take away their children's hope. One can still be honest and offer hope. Tell the children how the person with cancer is being cared for – the treatment he/she is having, what the doctors say, and what things can be put in place to make things easier for the family.

Organ Donation Following a Cancer Diagnosis

There are cancer survivors who want to help other people by becoming organ donors. For many people who have had cancer, it is possible to donate - but this varies by cancer type and medical condition.

There is always a pressing need for donated organs. Some organ donations, such as kidney donation, may be done when a person is still living. Others are possible only if a person wishing to donate passes away under certain circumstances.

Can a donated organ give someone cancer?

The risk of passing on cancer to the person who gets an organ is very small, but there have been some reports in the medical literature of this happening. This is partly because organ recipients are given drugs to suppress their immune systems to help prevent rejection of the transplant. This may make

their immune system unable to identify and kill cancer cells that may have been transplanted with the organ.

According to a study by the United Network for Organ Sharing (UNOS) in the United States of America, under certain circumstances there may be an acceptable risk in using organs from donors who have had certain types of cancer. This is particularly true if there is a long cancer-free interval before the organ donation. At present, UNOS does not recommend accepting organs from people with 'actively spreading cancer'. The exception to this is organs from donors with primary brain tumours that have not spread beyond the brain stem. These have not been found to impact life expectancy when compared to people who received organs from donors without brain cancer. In a study of nearly 500 organ recipients, no one got the disease from the donated tissue of a person who had brain cancer. Acceptance of organs for donation is up to each organ procurement agency and the organ recipient.

Some people with cancer may not qualify to be living donors due to their medical condition. That is, they may not be able to donate a kidney or a lobe of their liver, however, some may still have organs and body tissues that can be used after they pass away.



[Picture Credit: Organ Donor]

If someone wants to donate, it is fine to be listed as a donor. One must make sure that the rest of the family knows of these wishes, since they may be asked to give consent. If the cancer has been actively spreading, internal organs will not be taken, but if the person dies after being cancer-free for a long time, the organs may be used. Other tissues, such as skin, tendons, and bone can often be used. Careful testing of the organs and tissues is done at the time of death. The

decision about which organs or tissues can be safely used is then made by medical professionals, as long the family agrees that the person wanted to donate.

Even if other organs and tissues cannot be used, donating the corneas from the eyes is one way to offer help to others. Almost all people with cancer (except those with certain blood or eye cancers) can donate their corneas. Contact the tissue bank for more information in this regard.

Cancer and Sexuality

In addition to cancer survivors being human beings, all are also sexual beings! Sexuality is a normal, healthy, natural part of who humans are as individuals throughout every stage their lives. It is not one defined thing, but a combination of many aspects of one's life. Human sexuality includes not only sexual behaviour but also gender. It also includes how the human body works, values, attitudes, beliefs and feelings about life and love.

Youth learn about their sexuality from the day they are born. It is important to let kids feel good about their sexuality from the beginning. This will make it easier for them to ask questions about sex later on in life. Parents can initiate conversations about sexuality using many different themes - relationships, communication, respect, body image as well as intimacy and sexual behaviour - as a way

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to share values and factual information enabling young people to take charge of their lives, have loving relationships and make healthier, safer and better-informed decisions related to sexuality.

The term 'sex', in a biological sense is male, female, or intersexed. Sexual behaviour usually involves touching oneself or another person in ways that stimulate sexual feelings and pleasure. Sexual behaviour includes many different ways of touching which can range from holding hands or massage to masturbation or vaginal or anal intercourse including oral sex.

Sexuality changes and grows throughout one's life. Sexuality includes sexual behaviours, sexual relationships, and intimacy; how individuals choose to express themselves as males and females (including the way they talk, dress, and relate to others); sexual orientation (heterosexual, homosexual, bisexual), values, beliefs and attitudes as it relates to being male and female; changes that individuals go through like puberty, pregnancy or menopause; and the choice of having children or not.

Cancer treatment can cause a variety of sexual changes. Even though the causes may be different – surgery, chemotherapy, hormone treatment or radiation – the resulting changes are often similar. Some patients experience changes in all phases of sexual response (desire, arousal, orgasm, resolution), while others experience none.

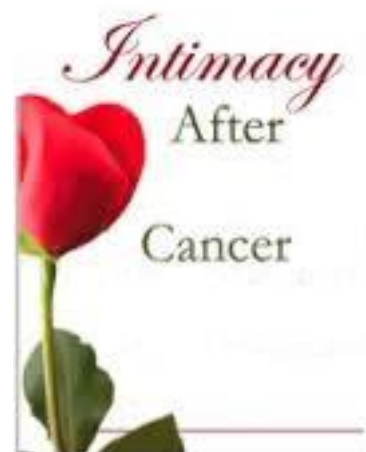
The most common sexual change for cancer patients is an overall loss of desire. For men, erection problems are also a common problem. For women, vaginal dryness and pain with sexual activity are frequent. Most men and women are still able to have an orgasm even if cancer treatment interferes with erections or vaginal lubrication, or involves removing some parts of the pelvic organs. However, it is common for patients to need more time or stimulation to reach orgasm.

Cancer treatment side effects, such as fatigue, nausea, vomiting, diarrhoea, constipation, hair loss, weight changes, scars and sensitivity to tastes and smells may leave one feeling exhausted and uncomfortable. These side effects consume so much energy that sex may be low on the priority list at times. Although medications are available to treat many of these symptoms, some of these same drugs can decrease sexual desire or make it harder to reach orgasm.

[Picture Credit: Sexuality]

When sexual changes do occur, they generally do not improve right away, often persisting until a good remedy is found. Finding the most helpful remedy may take time and patience because sexual changes can be caused by both psychological and physical factors.

Furthermore, treatment-related sexual changes caused may be long-term or permanent. Survivors should talk with members of their health care team before treatment to learn about what sexual changes to expect from their cancer or cancer treatment. By knowing what may happen, one may be better prepared and more knowledgeable about potential sexual changes.



It is usually safe to have sex during cancer treatment unless the doctor tells one not to. Talk with the treating doctor before participating in sexual activities.

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If one is having sex during chemotherapy, it may be advisable to use barrier protection, such as condoms or dental dams (for oral sex), since chemotherapy chemicals can be found in semen or vaginal fluid. More importantly for patients in their childbearing years a pregnancy, during or just after chemotherapy, can be complicated by birth defects.

Radiation therapy from an external machine does not make one radioactive or endanger one's partner in any way. If someone is undergoing brachytherapy, in which radioactive seeds are implanted in the body, he/she may have to stop sexual activity for a brief period until the strongest radiation has left the body.

Sex can be a problem if one has bleeding in the genital area or recently had surgery or if the immune system is very weakened.

Consultation with a sexologist may be of value in the event of any uncertainty about sex and sexuality.

Tisnasari, I.A.M.A.S., Nuraini, T., Afiyanti, Y., Rudi, R. & Maria, R. 2023.

Objective: To explore: 1) the unmet needs of breast cancer patients; 2) the sexual needs experienced by breast cancer survivors; 3) the experiences of cancer patients at the time of relapse, including the biopsychosocial-spiritual aspects of their experiences.

Materials and methods: Interpretative phenomenological qualitative research by conducting direct in-depth interviews with participants who met the inclusion criteria. Sample analyzed were breast cancer survivors who had experiences related to unmet needs (14 participants) or sexual problems (12 participants); adult cancer patients who experienced recurrences (10 participants).

Results: Themes identified for breast cancer patients with unmet needs were i) overcoming health problems in breast cancer survivors; ii) need to access the best health services; iii) women's unmet information needs concerning cancer treatment. For breast cancer survivors: i) information is needed to overcome sexual problems, ii) family support is needed to get sexual information, and iii) health care facilities need to provide sexual information. For patients experiencing recurrences: i) the reaction that occurs when receiving bad news; ii) efforts made during a relapse, iii) self-concept during a relapse.

Conclusions: Health-related problems of breast cancer survivors, such as fatigue and fear of cancer recurrence, can lead them to have trouble with social relationships, question their spirituality, and struggle with sex and sexuality. Oncology nurses and other professionals need to be aware of the unmet needs of breast cancer survivors, especially in relation to resolving the sexuality issues of cancer survivors. Understanding of the experiences of patients with relapse of different types of cancer should be improved.

Sexual Orientation and Cancer

While populations are often analysed by age, sex, and race with respect to cancer risk and cancer outcomes, sexual orientation has previously not been studied as a factor for either cancer incidence or cancer outcome. A study published in the journal *Cancer* on May 9, 2011 has now specifically examined the cancer survivorship of the gay, lesbian, and bisexual population (DOI: 10.1002/cncr.25950). The study authors found that cancer outcomes differ based on sexual orientation.

While there is a dearth of data on cancer survivorship among gay/lesbian/bisexual populations, it has been suggested that these populations generally engage in behaviours that are associated with

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greater cancer risk. These risk factors include a higher incidence of obesity and alcohol consumption among the lesbian population and a higher rate of smoking among gay men, lesbians, and bisexuals. Furthermore, recent studies have shown that same-sex sexual contact is linked to a higher incidence of head and neck and anal cancers. However, the question of cancer survivorship with respect to sexual orientation has not been well-studied, since most cancer surveillance studies do not record this statistic.

Lesbian, gay, and bisexual populations are not part of cancer surveillance, resulting in scarce information about the cancer survivorship of these populations. To address this information gap, the authors examined the prevalence of cancer survivorship by sexual orientation and cancer survivors' self-reported health by sexual orientation.

The authors explored these issues by analysing pooled data from the California Health Interview survey from 2001, 2003, and 2005. By using descriptive statistics and logistic regressions, they examined the cancer prevalence in men and women by sexual orientation and subsequently compared the self-reported health of male and female cancer survivors by sexual orientation.

Among women, the authors found no significant differences in cancer prevalence by sexual orientation, but lesbian and bisexual female cancer survivors had 2.0 and 2.3 × the odds of reporting fair or poor health compared with heterosexual female cancer survivors. Among men, they found significant differences in cancer prevalence, with gay men having 1.9 × the odds of reporting a cancer diagnosis compared with heterosexual men. There were no differences by sexual orientation in male cancer survivors' self-reported health.

There are sex differences in the impact of cancer on lesbian, gay, and bisexual cancer survivors. Lesbian and bisexual cancer survivors need to be targeted by programmes and services to assist these cancer survivors in improving their health perceptions, whereas healthcare providers and public health agencies need to be made aware of the higher prevalence of cancer in gay men to prevent future cancers through increased screening and primary prevention.

Raque, T.L., Ross, K.V., Hangge, A.R. & Gaines, R.C. 2023.

“Lesbian and queer women face unique experiences navigating cancer care, including challenges in accessing services that incorporate their relational supports. Given the importance of social support for survivorship, this study examines the impact of cancer on lesbian/queer women in romantic relationships. We conducted the seven stages of Noblit and Hare's meta-ethnography. PubMed/MEDLINE, PsycINFO, SocINDEX, and Social Sciences Abstract databases were searched. Two hundred and ninety citations were initially identified, 179 abstracts were reviewed, and 20 articles were coded. Themes were (a) intersectionality of lesbian/queer identity in the cancer context; (b) institutional and systemic supports and barriers; (c) navigation of disclosure; (d) characteristics of affirmative cancer care; (e) survivors' critical reliance on their partner(s); and (f) shifts in connection after cancer. Findings indicate the importance of accounting for intrapersonal, interpersonal, institutional, and socio-cultural-political factors for understanding the impact of cancer for lesbian and queer women and their romantic partners. Affirmative cancer care for sexual minorities fully validates and integrates partners in care, removes heteronormative assumptions in services provided, and offers LGB+ patient and partner support services.”

Wheldon, C.W., Bates, A.J., Polter, E.J., Rosser, B.R.S., Kapoor, A., Talley, K.M.C., Haggart, R., Kohli, N., Konety, B.R., Mitteldorf, D., Ross, M.W., West, W. & Wright, M. 2023.

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Background: Anodyspareunia may be an adverse outcome of prostate cancer (PCa) treatment for gay, bisexual, and other men who have sex with men (GBM).

Aim: The aims of this study were to (1) describe the clinical symptoms of painful receptive anal intercourse (RAI) in GBM following PCa treatment, (2) estimate the prevalence of anodyspareunia, and (3) identify clinical and psychosocial correlates.

Methods: This was a secondary analysis of baseline and 24-month follow-up data from the Restore-2 randomized clinical trial of 401 GBM treated for PCa. The analytic sample included only those participants who attempted RAI during or since their PCa treatment (N = 195).

Outcomes: Anodyspareunia was operationalized as moderate to severe pain during RAI for ≥ 6 months that resulted in mild to severe distress. Additional quality-of-life outcomes included the Expanded Prostate Cancer Index Composite (bowel function and bother subscales), the Brief Symptom Inventory-18, and the Functional Assessment of Cancer Therapy-Prostate.

Results: Overall 82 (42.1%) participants reported pain during RAI since completing PCa treatment. Of these, 45.1% experienced painful RAI sometimes or frequently, and 63.0% indicated that the pain was persistent. The pain at its worst was moderate to very severe for 79.0%. The experience of pain was at least mildly distressing for 63.5%. Painful RAI worsened for a third (33.4%) of participants after completing PCa treatment. Of the 82 GBM, 15.4% were classified as meeting criteria for anodyspareunia. Antecedents of anodyspareunia included a lifelong history of painful RAI and bowel dysfunction following PCa treatment. Those reporting symptoms of anodyspareunia were more likely to avoid RAI due to pain (adjusted odds ratio, 4.37), which was negatively associated with sexual satisfaction (mean difference, -2.77) and self-esteem (mean difference, -3.33). The model explained 37.2% of the variance in overall quality of life.

Clinical implications: Culturally responsive PCa care should include the assessment of anodyspareunia among GBM and explore treatment options.

Strengths and limitations: This is the largest study to date focused on anodyspareunia among GBM treated for PCa. Anodyspareunia was assessed with multiple items characterizing the intensity, duration, and distress related to painful RAI. The external validity of the findings is limited by the nonprobability sample. Furthermore, the cause-and-effect relationships between the reported associations cannot be established by the research design.

Conclusions: Anodyspareunia should be considered a sexual dysfunction in GBM and investigated as an adverse outcome of PCa treatment.

Relay for Life

One person made a difference in 1985. One man decided he had to do something to stop the endless pain, suffering and loss due to cancer. He decided to raise funds for his local American Cancer Society, by doing something he enjoyed – running marathons. He spent an incredible 24 hours running around a track – a gruelling feat, but representative of what someone fighting cancer endures. He asked for the support of people he knew and raised US\$27 000.



[Picture Credit: Dr Gordy Klatt]

While Dr Klatt (a colorectal surgeon) circled the track, he thought about how others could take part. He envisaged a 24 hour team relay event that would raise money for the fight against cancer. Dr Gordy Klatt's determination was contagious and the following year he tapped into networks of friends, family and associates to celebrate cancer survivors and raise funds. Relay for Life was born. No longer just a

one-man show. Relay for Life events now involve entire communities with a mutual goal to celebrate cancer survivors and eradicate cancer.

South Africa too, embraced the concept of Relay for Life – with the Cancer Association of South Africa (CANSA) the South African licence holder. Relay for Life is a unique event that offers everyone in their respective community the opportunity to participate in the fight against cancer. It represents the HOPE that all of those lost to cancer will never be forgotten; that those who are fighting cancer will be supported and that one day cancer will be eliminated.

Relay For Life embraces entire communities; from the very young to the old. Teams raise funds before and during the Relay and these funds are dedicated to funding CANSA’s unique, integrated service within various communities.



[Picture Credit: Relay for Life]

Participants enjoy camping-out, good entertainment, good food, games and community camaraderie. They all share a common purpose – celebrating cancer survivors and raising funds to eradicate cancer. Contact CANSA to join the next Relay for Life event in your area and come and celebrate your survivorship!

Reducing the Risk for Cancer by Living a Balanced Lifestyle

For more information on living a balanced lifestyle and thereby reducing the risk for cancer, please consult the following Fact Sheets that are available on CANSA’s Website at www.cansa.org.za:

- Fact Sheet on Living a Balanced Lifestyle
- Fact Sheet on Dangers of Meats Cooked at High Temperatures
- Fact Sheet on Known Causes of Cancer
- Fact Sheet on Possible Harmful Chemicals in Personal Care Products

About Clinical Trials

Clinical trials are research studies that involve people. They are conducted under controlled conditions. Only about 10% of all drugs started in human clinical trials become an approved drug.

Clinical trials include:

- Trials to test effectiveness of new treatments
- Trials to test new ways of using current treatments
- Tests new interventions that may lower the risk of developing certain types of cancers
- Tests to find new ways of screening for cancer

The South African National Clinical Trials Register provides the public with updated information on clinical trials on human participants being conducted in South Africa. The Register provides

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information on the purpose of the clinical trial; who can participate, where the trial is located, and contact details.

For additional information, please visit: <https://pactr.samrc.ac.za/>

Medical Disclaimer

This Fact Sheet is intended to provide general information only and, as such, should not be considered as a substitute for advice, medically or otherwise, covering any specific situation. Users should seek appropriate advice before taking or refraining from taking any action in reliance on any information contained in this Fact Sheet. So far as permissible by law, the Cancer Association of South Africa (CANSA) does not accept any liability to any person (or his/her dependants/estate/heirs) relating to the use of any information contained in this Fact Sheet.

Whilst CANSA has taken every precaution in compiling this Fact Sheet, neither it, nor any contributor(s) to this Fact Sheet can be held responsible for any action (or the lack thereof) taken by any person or organisation wherever they shall be based, as a result, direct or otherwise, of information contained in, or accessed through, this Fact Sheet.



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Beads of Hope Canada

https://www.google.co.za/search?q=children%27s+cancer+beads+of+hope&source=Inms&tbm=isch&sa=X&ei=ljtrU-ezJsrEPJaUgLAP&ved=0CAYQ_AUoAQ&biw=1517&bih=714&dpr=0.9#facrc=_&imgdii=_&imgrc=k4kBbAgsfEDniM%253A%3B5Gu00h5FtRH6BM%3Bhttp%253A%252F%252F37.media.tumblr.com%252Ftumblr_mbbs7pQEbw1rinkoao1_1280.jpg%3Bhttp%253A%252F%252Fbeadsofcouragecanada.tumblr.com%252F%3B1219%3B538

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Condom

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Relay for Life

Prof Michael C Herbst. Picture taken at a Relay for Life Event held at the Denel Grounds in Irene, Pretoria, 2014.

Returning to Work

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Sexuality

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