Radiation Therapy – An Insight

**THE MYTH**  It is current/shock treatment. It burns the skin.

**THE FACT**  It is not current/shock treatment. It does not burn the skin.

What is Radiation Therapy?

Radiation therapy is a treatment in which X-rays or gamma-rays are used (to kill the cancerous cell). High energy X-rays are produced by linear accelerators and gamma-rays are produced by conventional tele-cobalt machines. The distinguishing features between X-rays, gamma-rays and other form of radiation are the ability to eject electrons from atom. This property is known as ionization.

Another form of radiation used in the treatment of breast cancer is electron beam therapy. And these are particular type of radiation which has specific beam attenuation (acts only at specified depth).

The aim of radiation therapy is to kill the cancerous cells and to control the spread of the disease. So neighbouring normal cells are also affected most of the times but they recover faster, hence generally radiation treatment is given over 5 to 6 weeks.

How does Radiation Act?

Radiation acts at the molecular level. The radiation damages the DNA (building blocks of life) by causing double strand breaks, which cause direct cell death. If there is single strand break, eventually, the cell dies because of mismatch repair.
Role of Radiation Therapy in Breast Cancer

Adjuvant – Adjuvant treatment is an addition which helps to reach the ultimate goal of treatment. Adjuvant therapy in cancer usually refers to surgery followed by Chemotherapy or Radiation therapy to help decrease the risk of cancer recurrence. Adjuvant treatment is required for those patients whose prognostic factors are more favourable for a possible recurrence after the surgery.

BCT – Breast conserving surgery + radiation + chemotherapy / hormone therapy. Chances of recurrence are as high as 80%, 2 cm around the tumour site. Therefore radiation in BCT forms an integral part of the treatment as it reduces the local recurrence as well as the possible relapse anywhere in the breast. The treatment here is more prolonged as the whole breast will be treated followed by boost or additional dose to the actual site of the origin of the tumour. Boost can be given by using electron beam therapy or Brachytherapy (interstitial implant - radioactive needles or wires, or small encapsulated source called seeds can be directly inserted into the body or adjunct tissue). The placement of seeded radioactive source in or near tumour is the technique of treating cancer with ionization radiation.

Earlier most of the patients underwent mastectomy either because of advanced disease or psychological factors may be removal of the organ results in less or no chance of recurrence. With BCT, local recurrence and overall survival is equivalent to mastectomy in early breast cancer. (Surgical Clinics of North America, 2003). The treating physician should give an option regarding BCT to every patient, as psycho-social trauma after the mastectomy is immense.

Palliative Radiation Therapy – The common place for the spread of cancer is bone & brain. Radiation is used to stop the progression of the disease and relieve the pain and other associated symptoms.

Complications/Side effects

Any treatment has its own complications. The commonest complication in radiation therapy is discolourization of the skin, normally skin sheds everyday (dead skin). This process is faster in case of radiation therapy. This is the reason for advising not to irritate (do not apply oil or cream) the part being treated. Sometimes patients can complain difficulty in swallowing which can be relieved with proper medication. In early days lung complications were seen but with advanced treatment facilities in the recent years have diminished this problem. Lymph edema (swelling of arms) is common after extensive surgery and may increase with addition of radiation therapy if proper exercise or physiotherapy is not done.

Therefore, Radiation therapy along with surgery & chemotherapy is an integral part in the treatment of breast cancer. So combined modalities are essential for proper management of breast cancer.

Dr. Vijay Baskar (Radio Oncologist)

Love Casts Out Fear *(by Sr. Mary Lilly)*

The day I realized that I had a malignant tumour in the right breast, my first reaction was fear, fear of the consequences – perhaps an early death. At that time in October 2006, I did not know how much it had advanced and in any case it was a sign to be prepared for anything. I cried unseen by others, but it was for a brief time. What helped me was the reality before me - the same is faced by so many people, in much more devastating conditions and situations. I told myself that I am one among this special people who have received a forewarning of the nearness or remoteness of what we fear - the moment of leaving this beautiful world and our near and dear ones. My outlook on life changed. You may be wondering where is love in all this? My understanding and experience of God is that of tenderly loving and caring parents. This God sent me into this world as a healing child and I believe He wishes well for me and if anything goes wrong He is aware of it and I know that everything works for the good of those who love God. For nearly fifty years I enjoyed good health; a blessing for which I am ever grateful to God who loves me and all His creatures as His beloved children, as one of the modern writers has put it: “for you...
...it is a tree, for God it is a beloved child!" Hence there is a reason to believe that if you anchor yourself in such a loving God there will be no room for fear.

From experience I know that it is true; it is inexplicable how the fear that surged up within me when I was told on October 4, 2006 that the cancer I had was of 2nd degree! My “heart sank” as the expression goes; tears welled up in my eyes. No one saw it, but God noticed it. Within a few seconds something inside me helped to overcome that terrible feeling of having reached the edge of a precipice from where there was no escape! I was able to accept the reality looking it in the face and make up my mind to embrace the inevitable, be it a few months or years available. Then, when the doctors added that though it is in the 2nd degree they could control it, I remember well that my response was a faint smile, but in my heart I was indifferent to the consequences and remained peaceful.

The process of Surgery, Chemo, Radiation, everything went on as scheduled and uneventfully as the doctors say. All through this I was confident that all shall be well. The thought that God was healing me in every way, not only physically, but more significantly emotionally and spiritually was a powerful experience. It helped me to see everybody and everything in a new way. My helpless situation was made easy by the way my sisters reached out to help me and I was touched by their availability at all times even in the middle of the night. Being a ‘patient’ for some time taught me to see myself as a dependent creature and to develop an attitude of gratitude for even small helps received like helping you with both washing your clothes, bringing a glass of water, serving you food and so on. I see myself becoming more sensitive and compassionate to those who are sick and more concerned about the environment with life in its myriad forms.

Apart from these personal reflections and immediate help received from those around me, there was something very supportive and encouraging in those lonely days and weeks (and months in my case as there was fluid collection which needed to be aspirated now and then; this continued till March)—it was the visits of my near and dear ones from far and the many letters and get-well cards sent by those who cared but could not come. These brought words of cheer, hope encouragement and blessing.

In the 3rd year after the first surgery, I was asked to undergo another similar surgery on November 17th 2009. This time I was more prepared and had a keener sense of entrusting everything and myself to God and the result is simply marvelous—serenity, peace, healing and joy. Now I am well enough to continue a normal life. My wish and prayer for all those who are ‘privileged’ to be sick in one way or other is that we, the ‘patients’ learn priceless lessons by surrendering ourselves in love to God who loves us and cares for us. Live one day at a time in the awareness of this love which banishes all fear from our minds and ears setting us free to be joyful every day of our life.

**ACTIVITIES OF AADHARA**

The most recent Crab Talk was held on 10th October 2009. Laxshmi (68 years old), a breast cancer survivor who was diagnosed in 1997, delivered a talk to the group. She had a Radical Mastectomy and 4 cycles of chemotherapy.

It is been 12 years now and Laxshmi was happy to report to the group that there are no signs of recurrences. She shared her experience by saying “having cancer really did not change me, it did teach me to consciously appreciate each new day in my life”. Her positive attitude has inspired her to live actively, and to cherish a healthy energetic life.

**OBITUARY**

It is with great sadness that I wish to inform the members of Aadhara the sudden and untimely death of Mr. Subhash Bagaria.

In a day and age when people proclaim small acts with immense noise, Subhash belonged to the rare breed of humans who wish for themselves to remain unseen while doing acts of true kindness.

The initiation of breast cancer patient and research support at the SJRI through the formation of Aadhara was enabled by a generous and unrestricted grant from The Bagaria Education Trust. Mr. Subhash Bagaria headed this trust. The reason for not disclosing this support upfront in our meetings and the news letter was because Subhash felt that new initiatives were more important than being identified as the supporter of these activities. The trust is the supporter of a number of other initiatives in health care.

In Subhash’s loss we have lost a dear friend and a fine human being, and we pray that his family finds the strength to bear this terrible loss.

T.S. Sridhar
St. John’s Research Institute
Worldwide, runners participate in marathons and other such races and use the event to raise funds for a charity in support of a cause close to their heart. Aadhara was a part of one such activity- the Bangalore Ultra Marathon. It was organized by Runners for Life (RFL) a recreation company. RFL Bangalore Ultra Marathon which is the first ever Ultra Marathon to be held in the city of Bangalore was held at Hesaraghatta on Nov 15 2009. We had two volunteers who ran the marathon to raise funds for “Aadhara” and also with the motive to spread Breast Cancer awareness. Mr Venkata Rachur ran and completed 50 kms and Mr Manju Mysore completed 25 kms. Aadhara is deeply indebted to them for their effort and initiative and also to all the donors who have donated generously to support our cause.

Aadhara also formed a core group of breast cancer survivors and empowered them to help other patients in coping with their illness. The Core Group Meeting was held on 30th January 2010. The group consists of 6 Breast Cancer survivors: Anita Vijayrajan, Bernadette Devraj, Laxshmi, Sampooranam Samuel, Sudha Menon and Vimala. Their experience in fighting the disease will be of great value to our support group.

Aadhara’s motive is to lend emotional strength to the patient, be there to listen, and to help overcome the fear and loneliness that accompanies cancer diagnosis. For this purpose we are trying to be a support tool for women and families of women affected by breast cancer.

**About Aadhara, The St. John’s Cancer Patient Support Group**

In October 2008, St. John’s Research Institute realized a dream to set up an active support group for breast cancer survivors and their caregivers. The objective was to address the mental health dimensions of cancer since cancer is not purely physiological in nature. A number of cancer survivors’ reports as well as research findings have proved time and again that the battle with cancer is better fought with a positive mind and genuine desire for life.

Aadhara aims to instill the desire to live life to the optimum. The team intends to conduct various supportive programs like individual therapy, group support therapy, talks and discussions with experts. It also hopes to provide a medium for some catharsis.

The group has already taken a step in stressing the need for a positive outlook during and after treatment. An attempt is also being made to reinforce the positive attitude among caretakers as well. Our emblem consists of pink ribbon which deemed world wide to be a universal symbol for breast cancer. And the two hands signify the support given to breast cancer and their caregivers.

The Aadhara seeks your help, support and contribution in its endeavor to help and educate cancer patients. The objective of this newsletter is to deliver psycho education via expert opinions and the experiences of patients and survivors to patients who have been diagnosed with cancer for the first time.