Cervical cancer is the commonest cancer in Indian women but rare in USA. It is the leading cause of cancer deaths. Failure to implement adequate screening program explains this disparity. Thanks to Pap's screening which was introduced in 1940's in USA. New developments in cervical cancer screening approaches may offer renewed hope.

1) Can HPV test replace Pap's smear - HPV test requires the collection of a swab of cells from cervix during Gynae examination. A major advantage of HPV test over the pap's smear is that it is much less prone to miss women who have lesions on their cervix and likely to progress to cancer in life if untreated. This is always a bit disconcerting that pap's smear misses about half the women who actually have cervical disease and in need of treatment. It was for poor performance of Pap's smear that guidelines were prepared to advise screening more frequently. When HPV is used, screening can be done less frequently, may be if targeted in right age group. But at present, we don't have the resources to adopt this strategy for screening.

2) Single visit approach – One or two visit plan is another newer strategy which can be adopted in low resource countries. Conventionally screening program uses Pap's smear or HPV test which is followed by colposcopy and biopsy and then definitive treatment. In low resource countries this multi step process can be converted into single or two visit process. Multiple steps offer plenty of opportunity for women to be lost from the system since it requires a minimum of 3 & 5 well coordinated visits to accomplish complete screening. Thus simplification is required for any screening. Simplification means eliminate diagnostic steps and offer treatment based on screening test results. In other words, a women who is positive for HPV is offered treatment without any further tests. Ideally results of screening test should be available before the woman leaves the health facility so that if the screening test is abnormal, treatment could be done on the same day. Thus this simple “screen and treat” approach requires only two visits. This is flawed by over treatment in women younger than 35 years of age. This approach can be adopted for women older than 35 years of age who are likely to have persistent HPV infection.

3) “See and Treat” approach – Acetic acid is put on the cervix which makes abnormal area white. Health workers and nurses have been trained to identify abnormal areas. The downside of this approach is that detection capabilities of acetic acid are poor – at best it misses about half the women at risk, but at the same time classifies almost a third of women who are at very low risk of cancer as being abnormal. Its performance is highly variable and dependent on training and supervision of clinicians and health workers. However, lack of access to better option of HPV testing has forced many countries to adopt this approach despite its shortcomings.

No screening program is perfect. A test may miss some disease or classify as abnormal, in women who are not at risk (over diagnosis). Progress planners need to balance the dangers of allowing women to potentially go on to develop cancer against the side effects and costs of providing treatment unnecessarily. In addition low resource countries have health service challenges competing health priorities to juggle. The new approaches based on “screen and treat” concept utilizing HPV testing have the potential to improve health and well being of women if the resources can be mobilized to implement screening more widely and judiciously.

Dr. Dewan AK
Medical Director
Breast cancer is now the most common cancer in women in most cities in India, and 2nd most common in rural areas. It accounts for 25% to 31% of all cancers in women. According to GLOBOCON (WHO), for the year 2012 an estimated 70218 women died in India due to breast cancer, more than any other country in the world. (Second China – 47984 deaths and third USA – 43909 deaths)

**Rising number of cases of breast cancer in India**

The number of breast cancer cases in all age groups is rising rapidly. The blame seems to lie with India's economic development and rapid urbanisation, leading to the westernisation of Indian women. Essentially, this means that urban Indian women marry late, have fewer children and breastfeed them less, all of which increase the risk by increasing their exposure to oestrogen and therefore their risk of developing the cancer, over their lifetime.

Urban Indian women also tend to have a more western diet, leading to obesity which increases the risk of breast cancer. Obesity increases the disease risk in post-menopausal women; menopause renders the ovaries, a main source of oestrogen dysfunctional, but in overweight, post-menopausal women, androgens transforms into oestrogens in fat tissues.

**Age Shift: Breast cancer now more common in young women.**

In India the average age of developing a breast cancer has undergone a significant shift over last few decades. Indian women tend to get this disease quite early compared to their counterparts in the Western world. While the majority of breast cancer patients in West are Postmenopausal and in their 60s and 70s. The picture is quite different in India with pre-menopausal patients constituting about 50% of all patients.

It can be seen clearly from the above data that breast cancer cases in younger age group have gone up. There is an increase of almost 24% in <40yrs age group & an increase of 13% in 40-50yrs age in last 8yrs. Breast Cancer in young women tends to be more aggressive. Many of these cancers are HER2 positive and ER/PR negative, or triple negative and they have a poor prognosis than those who have ER/PR positive tumours.

**Lack of Awareness & Screening leading to late presentation**

In India healthcare is low on priority and even in major cities, screening is an “alien” word for most people. This results in most people presenting only when symptomatic and on an average most ’symptomatic’ cancers are stage 2B and beyond (significant numbers in stages 3 and 4). Overall five year survival is not more than 60% instead of aggressive treatment of these patients. In the West, majority of breast cancers present at stage 1 and 2 resulting in good survival; as there is an increasing number of patients presenting with mammography detected cancer, with no symptoms. As we cannot always prevent this cancer, all we can do is to detect this cancer early and regular screening is the only way to go.

Hereditary breast cancer accounts for 5%-10% of all breast cancer cases involving inherited gene mutations like BRCA1, BRCA2, TP53, PTEN etc. Most people who develop breast cancer have no family history of the disease. However, when a strong family history of breast and/or ovarian cancer is present, there may be reason to believe that a person has inherited an abnormal gene linked to higher breast cancer. Genetic test can be done on simple blood sample. Of the 50 cases seen so far in one year of the Cancer Genetic Counselling Clinic at RGCI&RC, 28 have an identifiable cancer syndrome and out of these 18 (64%) have hereditary breast and ovarian cancer syndrome (HBOC). Most of them presented with a clear cut history of breast and ovarian cancer in the family. Pre-counselling done, samples sent for testing and those that tested positive underwent post-test counselling regarding preventive measures. Also, other members of the family were advised testing (in case of positive cases).

In Rajiv Gandhi Cancer Institute and Research Centre, whole October month is dedicated to breast cancer. It is our annual campaign to increase awareness about the disease and to promote screening. Free awareness talks and screening camps are arranged at various places as part of outreach activities. In the OPD, screening mammography is done at 50% discount throughout the year and clinical breast examination is offered free of cost.

**Three-Pronged approach to early detection.**

- **Mammography**
- **Breast Self Examination (BSE)**
- **Clinical Breast Examination (CBE)**

Dr. Jai Gopal Sharma / Dr. Indu Aggarwal

(Team Preventive Oncology)
The birth anniversary of Nobel Prize winning scientist Madam Curie, November 7th, is observed in India as National Cancer Awareness Day. RGCI&RC organized various activities on this occasion, to spread awareness about cancer prevention and the benefits of early detection.

ANukkad Natak was presented in the hospital premises by the Nursing Staff. Through this, the public was made aware of the harmful effects of tobacco and the other lifestyle choices that will reduce their cancer risk. Posters related to prevention and early signs & symptoms were made and displayed. CEO Mr. D.S. Negi concluded the program by imparting brief information on causes of cancer. He told the audience that only 5-10% of all cancer cases can be attributed to genetic defects whereas the remaining 90-95% has their roots in the environment and lifestyle.

Free Preventive Health Check-up was offered to all on this day. Specially made screening package for men included Height Check, Weight Check, Blood Pressure, CBC, Random Blood Sugar, KFT, LFT, Lipid Profile & PSA, while customized screening for women included Height Check, Weight Check, Blood Pressure, CBC, Random Blood Sugar, KFT, LFT, Lipid Profile, Pap smear & Mammography. The screening packages received overwhelming response with over 300 people availing of the facility on the day.

The commemoration of National Cancer Day continues at RGCI & RC, with health talks and screening camps being organized at various corporate offices in Delhi and Panipat, apart from Gender Resource Centres, throughout the month of November. Till 30th November, RGCI & RC is offering free cervical cancer screening through a Pap Smear Test. Many women have benefitted from the facility, and the numbers are expected to increase.

Bone marrow transplantation (BMT) is a highly specialized treatment and an important milestone in development of modern medicine. BMT is a curative treatment for many blood diseases which otherwise would prove fatal. These diseases include blood cancers, aplastic anemia, thalassemia, many congenital disorders of immune deficiency and metabolism.

Despite the advent of modern and specialised healthcare facilities in India, there are limited number of hospitals in the country, performing Bone Marrow Transplants. Rajiv Gandhi Cancer Institute and Research Centre has been providing this facility since 2001, when the first autologous transplantation was performed. Allogeneic transplantations commenced in 2007. There have been great developments and advancements in the techniques employed in BMT. Currently, experts at RGCI & RC regularly perform more complicated BMTs like matched unrelated BMT and haplo-identical BMTs with results which are comparable to any premier BMT centre of world. RGCI’s team of experienced hematologists performs up to 100 transplants per year. Till now RGCI has performed more than 350 transplants.

RGCI & RC organized BMT patients’ reunion on 1st November 2014 where more than 100 patients with their family members gathered at Hotel Crowne Plaza, and shared their experiences with each other. These patients were of 2 year to 68 years old and many of these were cured of deadly diseases. It was a moment of pride for the team when some of the patients who have undergone BMT at RGCI & RC, put up brilliant classical dance performance and displayed the excellent quality of life such patients are able to lead after the procedure. Few of these patients and families also came forward and committed to form a transplant support group to educate the new patients and families.
BREAST CANCER UPDATE - 2014

Rajiv Gandhi Cancer Institute & Research Centre, Delhi, participated in conference organized by ESIC Hospital, Basai Darapur, Delhi on Breast Update – 2014 at Silver Jublie Hall, ESIC Hospital, Basai Darapur, Delhi. Dr. Arvind Kumar Chaturvedi, Director - Radiology delivered a lecture on “Imaging in Breast Cancer”. More than 90 Doctors attended the meeting.

CANCER AWARENESS CAMP – NFL, PANIPAT, HARYANA

To commemorate the National Cancer Awareness Day, 7th November 2014, Rajiv Gandhi Cancer Institute & Research Centre, Delhi, organized month long activities to create cancer awareness amongst masses.

On 20th November 2014, RGCI & RC organized Cancer Awareness Talks and Screening Camps at NFL, Panipat, Haryana. Dr. Indu Aggarwal, SMO, and Dr. Shiveta Giri, Consultant – Surgical Oncology delivered talks on “Cancer Awareness & Prevention”. The talks were cherished by 118 people present. After the talks, screening camp was also held for females.

ANNUAL CONFERENCE OF EUROPEAN ASSOCIATION OF NUCLEAR MEDICINE (EANM’14)

Dr. Manoj Gupta, Consultant – Nuclear Medicine, RGCI & RC attended the Annual Conference of European Association of Nuclear Medicine in Gothenburg, Sweden on 18th -22nd Oct. 2014. He made an oral presentation on his observation in differentiated thyroid cancer follow up. He also made a poster presentation on response evaluation in bone metastasis with FDG PET.

Besides his scientific contribution he also qualified the fellowship exam of European board of Nuclear Medicine (FEBNM) held on 18-19th October 2014 at Gothenburg, Sweden.

Mr. D. S. Negi (C.E.O.)
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Dr. D. C. Doval
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