5th Issue
June, 2017

Onco News

Published by : Somex Research and Health Pvt. Ltd.
(A Clinical Research and Academic Organisation)
www.somexresearch.com

From the Desk of Editor

Dear Readers,

CANCER SCREENING SAVES LIVES!!!

Cancer is preventable, treatable & curable!

At least one-third of all cancer cases are preventable. Prevention offers the most cost-effective long-term strategy for the control of cancer.

While there is no question that we need better cancer treatments, if we really want to win the war on cancer, then we need to prevent the disease and not just treat it. This is possible by-

Primary Prevention: By controlling exposure to risk factors or increasing individuals' resistance to them.

Secondary Prevention: Screening is the presumptive identification of unrecognized disease or defects by means of tests, examinations, or other procedures that can be applied rapidly. But unfortunately all cancers are non-preventable & suitable for screening.

Operationally, a "clinically significant" cancer can be defined as one that, left untreated, would lead to symptoms, metastases, or a premature death from cancer-but for each individual, these risk must be balanced against his competing risks of non cancer-related morbidity and mortality, and the risk of suffering harm from overtreatment of unnecessary treatment.

We all as health professionals should make all our efforts to educate our patients and society regarding cancer prevention and screening. However screening sometimes leads to over diagnosis and false positive results. In this issue I will be covering salient points about various aspects of screening of common cancers.

With regards
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Senior Medical Oncologist

Colorectal Cancer Screening:

Most colorectal cancers arise from adenomas, many of which are polyps that progress from small to large (>1 cm) polyps, and then to dysplasia and cancer. Some colon cancers arise from nonpolypoid adenomas that are flat or depressed. There are high-risk genetic syndromes like lynch syndrome (hereditary nonpolyposis colon cancer) and familial adenomatous polyposis.

Various options recommended for screening for adults aged 50 to 75 years are-

- Annual Fecal Occult Blood Testing (FOBT)
- Flexible sigmoidoscopy every five years, with FOBT every three years
- Colonoscopy every 10 years
- Screening people at increased risk.

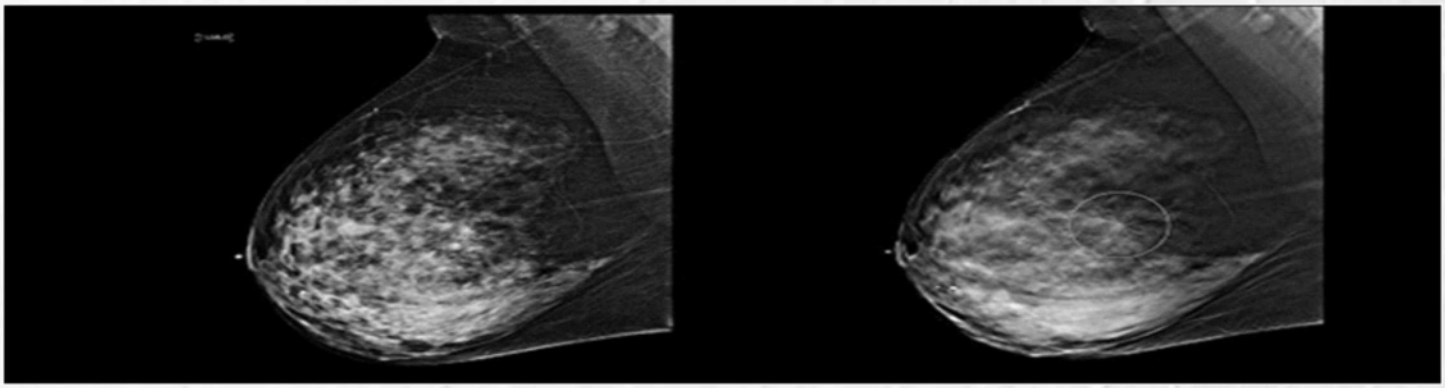
Breast Cancer Screening

The components of a breast cancer screening evaluation include breast awareness (i.e., patient familiarity with her

breasts), physical examination, screening mammography and screening breast magnetic resonance imaging in selected cases.

Risk Assessment: Women can be stratified into two basic categories for the purpose of screening recommendations, those at average risk and those at increased risk.

The modified Gail model assesses the risk of invasive breast cancer as a function of age, menarche, age at first live birth or nulliparity, number of first-degree relatives with breast cancer, number of previous benign breast biopsies, atypical hyperplasia in previous breast biopsy, and race. The Gail model should not be used for women with a predisposing gene mutation, a strong family history of breast or ovarian cancer suggestive of a genetic predisposition, women with a prior history of thoracic radiation, or for those with lobular carcinoma in situ.



Cervical Cancer:

Cervical cancer is one of the most preventable cancers today. In most cases cervical cancer can be prevented through early detection and treatment of abnormal cell changes that occur in the cervix years before cervical cancer develops. The traditional test for early detection has been the Pap test.

Pap Smear:

Low-grade lesions and atypical squamous or glandular cells are better detected by the liquid-based technique and that the same specimen may be used for the pap smear and for HPV testing.

HPV Testing:

Out of various HPV genotypes infecting the genital tract mucosa, types 16 and 18 are responsible for about 70% of cervical cancers.

There is a high prevalence of HPV infection in sexually active women, particularly in younger women.

HPV testing, either alone or in combination with cervical cytology, is more sensitive than cervical cytology alone in detecting cervical histopathology, including adenocarcinoma.

- Cervical cancer testing should start at age 21.
- Women between the ages of 21 and 29 should have a pap test plus an HPV test (called “co-testing”) done every 5 years.
- Women over age 65 who have had regular cervical cancer testing in the past 10 years with normal results should not be tested for cervical cancer.
- A woman who has had her uterus and cervix removed (a total hysterectomy) for reasons not related to cervical cancer and who has no history of cervical cancer or serious per-cancer lesions should not be tested.
- All women who have been vaccinated against HPV should still follow the screening recommendations.

Lung Cancer Screening :

Following facts about lung cancer make it an attractive disease for screening: The at-risk population is known, the prevalence is high, morbidity and mortality is high, detection at early stage leads to better outcome.X-ray of chest alone is not good screening test as it does not after the mortality or morbidity.

Risks and benefits of Lung Cancer Screening :

- Effective lung screening may prevent premature lung cancer deaths.
- Quality of life improvement and reduction in disease and treatment related morbidity are observed.
- The risks involved in screening are false-positive results, false-negative results, futile detection of small non-aggressive tumors or of indolent disease and radiation exposure with low dose CT scans.

Ovarian Cancer Screening :

In general, there is no recommendations for screening for ovarian cancer.

For women at increased risk like those with possible inherited breast-ovarian cancer syndrome, genetic counseling and genetic testing for BRCA-1 and BRCA-2 and Lynch mutation is recommended. National Comprehensive Cancer Network recommends screening every six months with CA 125 and TVUS beginning between the ages of 30 and 35 years or 5 to 10 years earlier than the earliest age of first diagnosis of ovarian cancer in the family.

Prostate Cancer :

PSA level and DRE are commonly used for screening and early detection, although both are limited by low specificity; only one-quarter of men with an abnormal DRE or a PSA level > 3 ng/ml are found to have cancer on biopsy.

Prostate-Specific Antigen for Screening:

Although PSA has proved to be a valuable test for early detection, prognosis, and monitoring the response to therapy, its use for population-based screening for prostate cancer remains controversial. The widespread adoption of PSA testing in the United States shifted the stage at diagnosis away from metastases in 20% of patients in the 1980s to 5% in the 1990s, with a corresponding increase in frequency of early-state cancers that are potentially curable with surgery or radiation. Over the last two decades, the age adjusted mortality rate for prostate cancer in the United States has declined by 42% from its peak in 1992, a more rapid decline than in any other country. In the largest randomized trials, PSA screening reduced the risk of dying from prostate cancer by 21% to 44% (29% to 56% among men actually screened).

Nevertheless, PSA has low specificity: three of four men who have a biopsy for a PSA > 3 ng/ml are not found to have cancer, and 10% to 56% to those in whom cancer is found would probably have lived out their lives with no symptoms from the disease, and are therefore considered "over detected." An additional consideration is that the prostate biopsy itself carries a risk of bleeding and infection in 3% to 4% of those undergoing the procedure, which increases with the number of cores obtained. In case where" saturation" biopsy are performed, in which up-wards of 24 to 30 cores are sampled in the same session, the risk is higher and mortalities have resulted. Most cancers detected have been treated immediately with radical surgery or radiation, with substantial risk of adverse effects on bowel, urinary, and sexual function.

In screening large population, the lack of specificity of PSA leads to over diagnosis, the discovery of incidental, clinically insignificant cancers that pose little or no immediate threat to life or health, which often leads to overtreatment with accompanying morbidities that may be permanent and compromise QOL, With rare exceptions, low risk cancers managed expectantly, as well as intermediate-risk cancers in older men, have a good prognosis when carefully observed on as " AS" protocol, rather than proceeding to immediate treatment. AS is treatment that in designed to changes in the cancer that indicate it has become more aggressive and therefore requires more definitive interventions.

Screening Recommendations:

The United States prostate screening Task Forces(USPSTF) recent recommendation against screening has been understandably criticized as based on a one-time analysis of rapidly changing field. The USPSTF justifiably raised concerns about he high level of over detection sand overtreatment inherent in PSA screening, which can lead to the immediate risks of harm from invasive prostate biopsies and subsequent radical therapy when cancer is found. But the potential harms from PSA screening can be greatly reduced by risk-adjusting screening so that if focuses on men at high risk of otherwise dying of prostate cancer; incorporating into screening newer, more specific biomarkers; and avoiding radical treatment of low-risk cancers. In recently published computer simulation model of PSA screening, prostate cancer mortality was reduced by 28% over the lifetime of men screened annually from ages 55 to 69. Over the lifetime of this population of 1,000 men, only 98 men would need to be screened and five cancers detected (three treated and two managed expectantly to prevent one death from prostate cancer.

Risks of Screening:

Over diagnosis: Screening tests may find slow-growing cancers that would not have caused any harm during a person's lifetime. As a result, some people may receive potentially harmful, painful, stressful, and/or expensive treatments that they did not need.

False positives: Sometime a screening test will suggest that a person has cancer when does not.

Increased testing: Doctors may run additional tests that a person may not need because of over diagnosis. These tests can be physically invasive costly, and cause unnecessary stress and worry.

False reassurance: Sometime a screening test will suggest a person does not have cancer when they actually does.

RECOMMENDATIONS FOR CANCER PREVENTION

1. Be as lean as possible without becoming underweight.
2. Be physically active for at least 30 minutes every day. Limit sedentary behavior.
3. Avoid sugary drinks. Limit consumption of energy-dense foods.
4. Eat more of variety of vegetables, fruits, whole grains and legumes such as beans.
5. Limit consumption of red meats (such as beef, pork and lamb) and avoid processed meats.
6. If consumed at all, limit alcoholic drinks to 2 for men and 1 for women a day.
7. Limit consumption of salty foods and foods processed with salt (sodium)
8. Don't rely on supplements to protect against cancer.
9. New mothers should breastfeed babies exclusively for up to 6 months and then add other liquids and foods.
10. Post treatment, cancer survivors should follow the recommendations for cancer prevention.

And always remember- Do not smoke or chew tobacco !!!

Seven Warning Singals of Cancer (CAUTION)

- **C**hange in bowel or bladder habits
- **A** sore that doesn't heal
- **U**nusual bleeding or discharge
- **T**hickening or lump in breast or elsewhere
- **I**ndigestion or difficulty in swallowing
- **O**bvious change in wart or mole
- **N**agging cough or hoarseness

About the SoMex Research & Health Pvt. Ltd.

- It is a clinical research and academic orgazation for promotion of same in Rajasthan.
- SoMex Academic & Research Committee helps medical fraternity & others in evaluating & designing clinical trials & protocols.
- Somex has conducted more than 35 Clinical Trials with diverse indications Including Phase 1 and 2, 3 and BA/BE Studies.
- Somex also designes and conducts Seminars, CMEs & Medical Conferences. It has conducted more than 45 CMEs in various medical fields.
- Conducts Cancer Awareness & Health Survey programs.

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Printed and Published by :
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