

BREAST CANCER-BURDEN, EPIDEMIOLOGY & PREVENTION

CONTENTS

- Introduction
- Burden
- Epidemiology
- Prevention
- References

INTRODUCTION

- **Cancer** – group of diseases characterised by
 - (i) abnormal growth of cells,
 - (ii) ability to invade adjacent tissues and even distant organs, and
 - (iii) eventual death of affected patient when if tumour has progressed beyond a stage when it can be removed successfully.

Major Categories:

- Carcinomas / Sarcomas / Lymphomas, leukemia, myeloma

CONTD.,

- The tumour or lesion, at the site or organ where cancer originally started, is called as '**Primary Tumour**'.
- When the cancer spreads to local or distant organ, the tumour developed at that site is called as '**Secondary Tumour**'.
- Widespread metastases – primary cause of death from cancer

GLOBAL CANCER BURDEN 2020

- New cases – 19.3 million
- Deaths – 10.0 million (leading cause)
- 5 year prevalence – 50.6 million
- 1 in 4 men and 1 in 5 women worldwide develop cancer during their lifetime.
- 1 in 8 men and 1 in 11 women worldwide die from cancer

Leading Cancer Types in 2020

Both sexes



Breast

2.2 million new cases
11.7%



Lung

2.2 million new cases
11.4%



Colorectal

1.9 million new cases
10.0%



Prostate

1.4 million new cases
7.3%



Stomach

1.0 million new cases
5.6%

Males



Lung

1.4 million new cases
14.3%



Prostate

1.4 million new cases
14.1%



Colorectal

1.0 million new cases
10.6%



Stomach

0.7 million new cases
7.1%



Liver

0.6 million new cases
6.3%

Females



Breast

2.2 million new cases
24.5%



Colorectal

0.8 million new cases
9.4%



Lung

0.7 million new cases
8.4%



Cervix uteri

0.6 million new cases
6.5%



Thyroid

0.4 million new cases
4.9%

CANCER STATISTICS IN INDIA

- Estimated number of people with cancer (2020) – 2.7 million
- Every year, new cancer patients registered – 13.9 lakhs
- Cancer related deaths – 8.5 lakhs
- One women dies of cervical cancer every 8 minutes
- For every 2 women newly diagnosed with breast cancer, one women dies of it
- Mortality due to tobacco use in India is estimated at upwards of 3500 persons every day

RISK FACTORS

- Tobacco
- Alcohol
- Dietary factors
- Occupational exposure
- Infections: viruses, bacteria and parasite
- Environmental pollution
- Reproductive factors & hormones
- Obesity & reduced physical activity
- Genetic factors

BREAST CANCER



- Malignant tumor that starts in the cells of breast
- World's most prevalent cancer
- Global cancer incidence 2020 – 2.3 million cases (11.7% of all cancer cases)
- India – accounted for 13.5% of all cancer cases
- 10.6% of all deaths
- Survival rate decreased by 2.7 times – stage IV detection compared to stage I detection

CONTD.,

Risk factors that are permanent and cannot be changed

- Age: biggest single risk factor, 35 – 50 years and after 65 years
- Heredity: mutations in BRCA1 and BRCA2 genes (10 to 30 times)
- Women's first degree relative or multiple family members
- Reproductive history: early start of menstrual periods (before 12 years)
- Late age of menopause (after 50 years)

CONTD.,

Risk factors that can be changed

- Parity: late age at first child birth (after age 30 years)
- unmarried women, nulliparous women
- Hormone replacement therapy
- Previous treatment using radiation therapy
- Being overweight
- Sedentary lifestyle
- Smoking, alcohol consumption
- High economic status

WARNING SIGNS OF BREAST CANCER:

- Lump in the breast or underarm area (armpit)
- Thickening or swelling of part of the breast
- Puckering or dimpling of breast skin
- Redness or flaky skin in the nipple, areola of the breast
- Pulling in of the nipple or change in position or shape and pain in the nipple area
- Nipple discharge other than breast milk, including blood
- Any change in the size or the shape of the breast
- Constant pain in any area of the breast or armpit

PREVENTION

Primary prevention:

- Eliminate the risk factors
- Dietary modifications – reducing fat intake
- Physical activity and weight reduction
- Educate women – warning signs of breast cancer
- Average age at menarche may be increased by physical activity and reduction of childhood obesity

SECONDARY PREVENTION

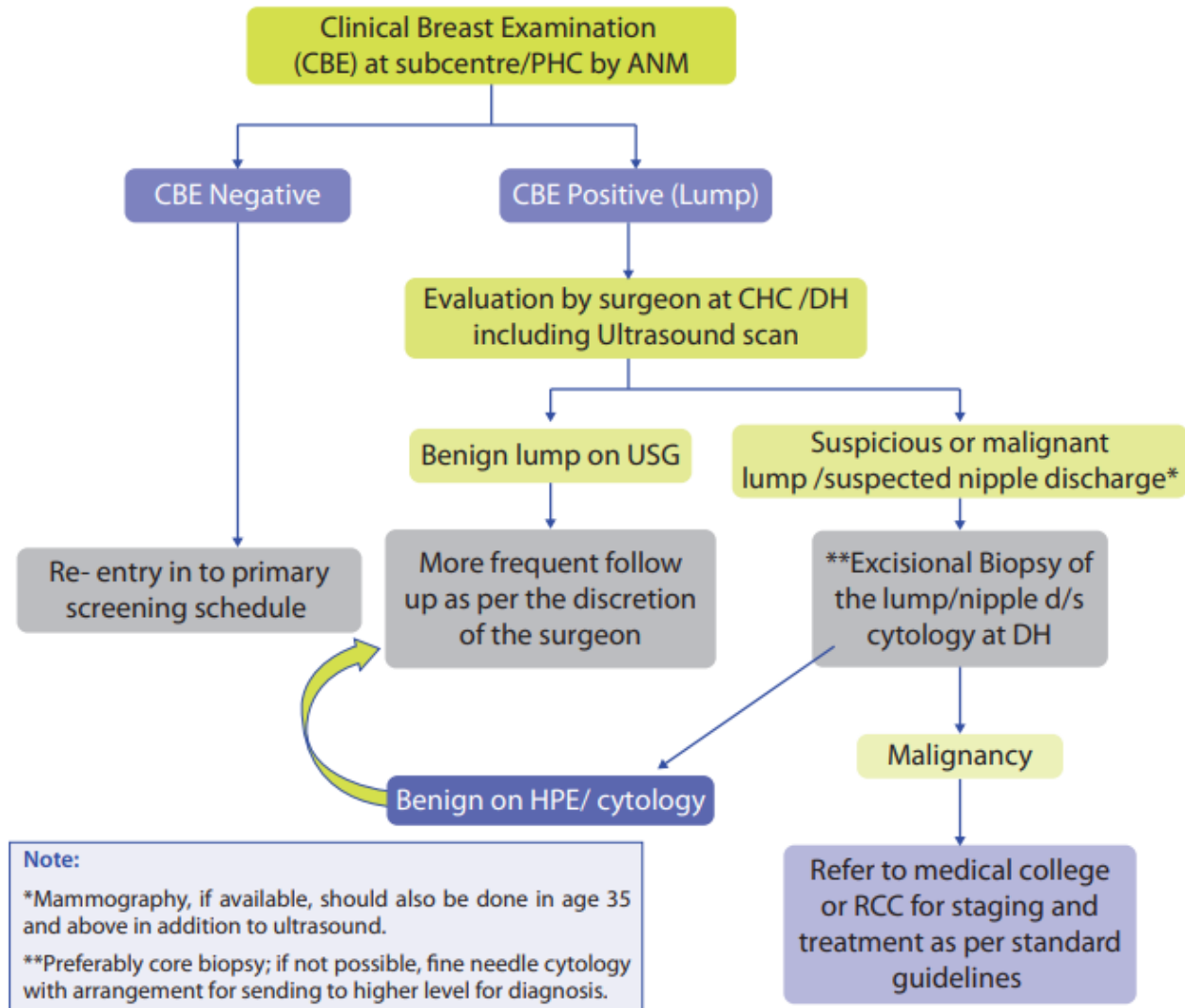
- Early detection of breast cancer – self breast examination, palpation by a physician, and mammography
- Appropriate treatment – breast conservative surgery
- Radiotherapy and chemotherapy and hormone therapy
- Follow up – to detect recurrence, to detect cancer in opposite side of breast
- Tertiary prevention: palliative care, breast prosthesis, psychological support

BREAST SELF EXAMINATION

Steps of BSE: <https://youtu.be/qhXRDmRS4uQ>

- Step 1: Stand in front of the mirror with both arms relaxed and besides your body. What to look for:
- Step 2: Keep both of your arms and press firmly over hips look for the same changes if any one of them is present.
- Step 3: Raise both your arms above the head, press your head by hands from behind and look for the same changes if any one of them is present.
- Step 4: Lie down on your back and using palms and fingers of you hand, touch, press and examine your breasts on both sides.
- Step 5: Follow step 04 while taking bath

Annexure 1a: Screening and Management Algorithm for breast cancer



Ways for Cancer Prevention and Control

Health systems strengthening:

People centric, diagnostics & treatment, timely referrals & follow up.



Universal health coverage:

No one is left behind



Community empowerment:

Health literacy, stigmatization, home care



Multi sectorial actions:

To minimize risks, health promotion



Health promotion:

To include healthy lifestyles



Comply with treatment advised:

Early treatment can cure many cancers and reduce its severity



Seek prompt medical advice:

For persisting abnormal complaints



Participate in cancer screening activities:

As per norms of eligibility



Policy and Programmes

Risk Reduction

No tobacco use:

Smoking, smokeless, avoid second hand smoke



No alcohol:

No initiation, cessation to be encouraged



Eat healthy diet:

Low in salt, sugar, fats; green leafy vegetables; fresh fruits & legumes



Physical activity:

Enhance daily activity levels, avoid sitting for long hours



Vaccination:

Hepatitis B, HPV



Early Detection



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WORLD CANCER DAY

4th February

Close 
 the care
gap 



Ministry of Health & Family Welfare
Government of India

75
Azadi Ka
Amrit Mahotsav



National Cancer Awareness Day

7th November



Together we can fight against cancer

Get yourself screened periodically for common cancers
if **you are more than 30 years old**

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THANK YOU