Breast Cancer Awareness

Part 1

BLehrer LLC

IBPS
INTEGRATED BIOPHARMA AND PHARMA SOLUTION

What is Breast Cancer ?

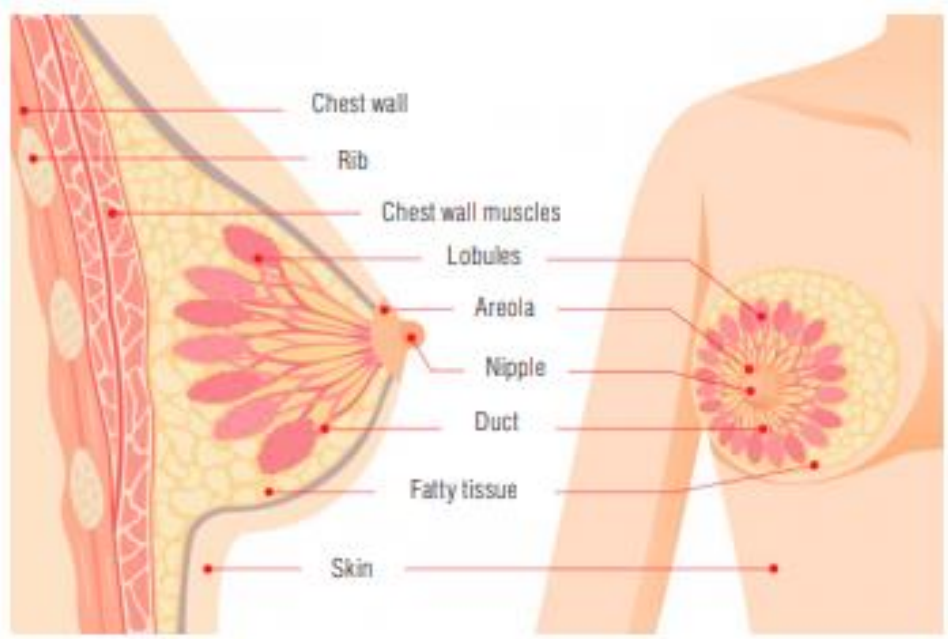
Breast cancer is a cancer that forms in the tissues of the breast – usually in the ducts (tubes that carry milk to the nipple) or lobules (glands that make milk). It occurs in both men and women, although male breast cancer is rare. This is the most common cancer in 104 countries worldwide

It begins when healthy cells in the breast change and grow out of control, forming a mass or sheet of cells called a tumor

A tumor can be **cancerous** or **benign**.

A cancerous tumor is malignant, meaning it can grow and spread to other parts of the body

A benign tumor means the tumor can grow but will not spread



Global

BURDEN OF CANCER

Total Population (2019)

7,676,965,500

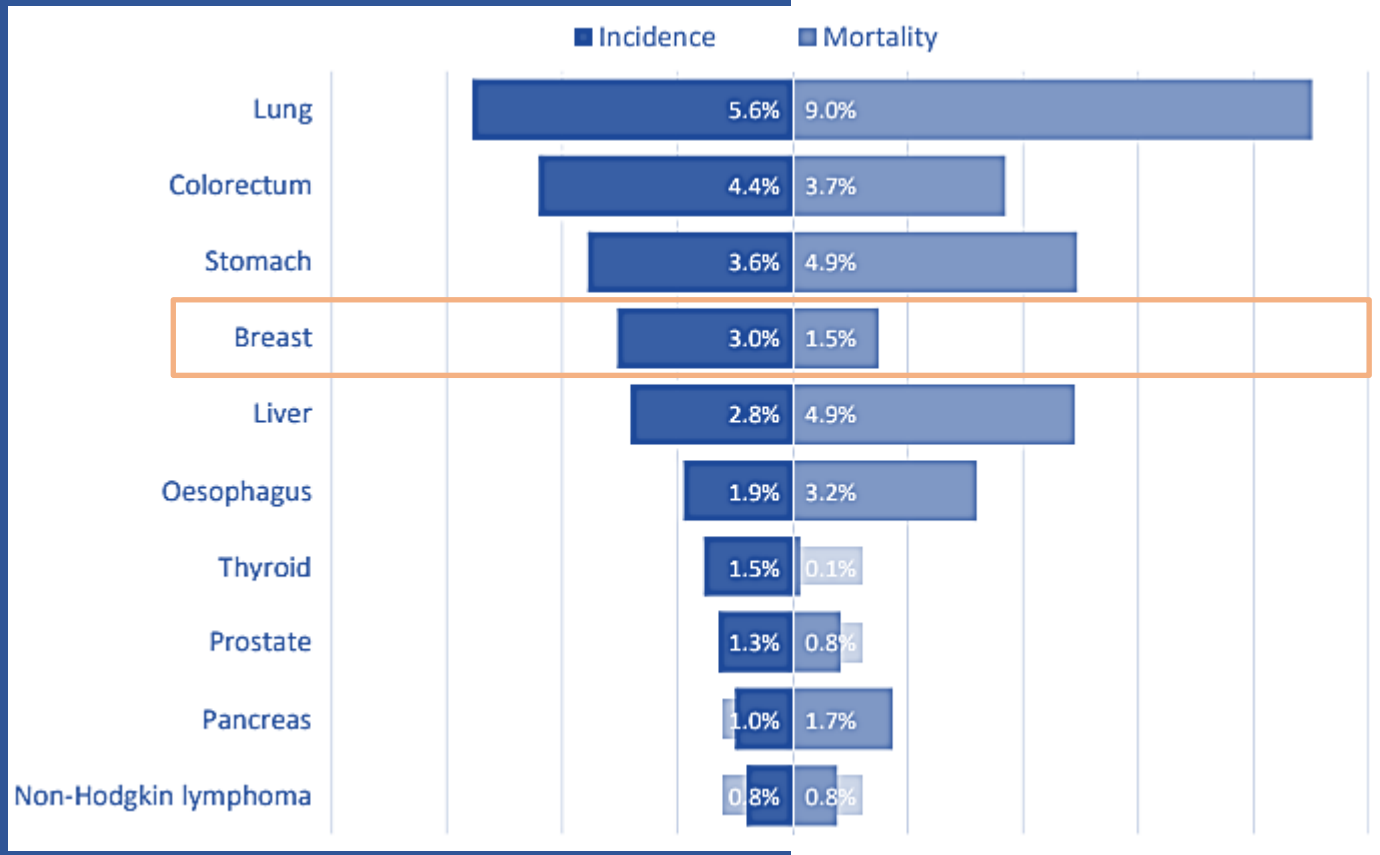
Total # cancer cases (2018)	Total # cancer deaths (2018)
18,078,957	9,555,027

Total # Breast cancer new cases (2018)

~ 2 Million

Total # Breast cancer deaths (2018)

~ 0.6 Million



Most Common Cancer Cases (2018)

WHO Cancer Regional Profile 2020 (Globocan)

BLehrer LLC

IBPS INTEGRATED BIOPHARMA AND PHARMA SOLUTION

India

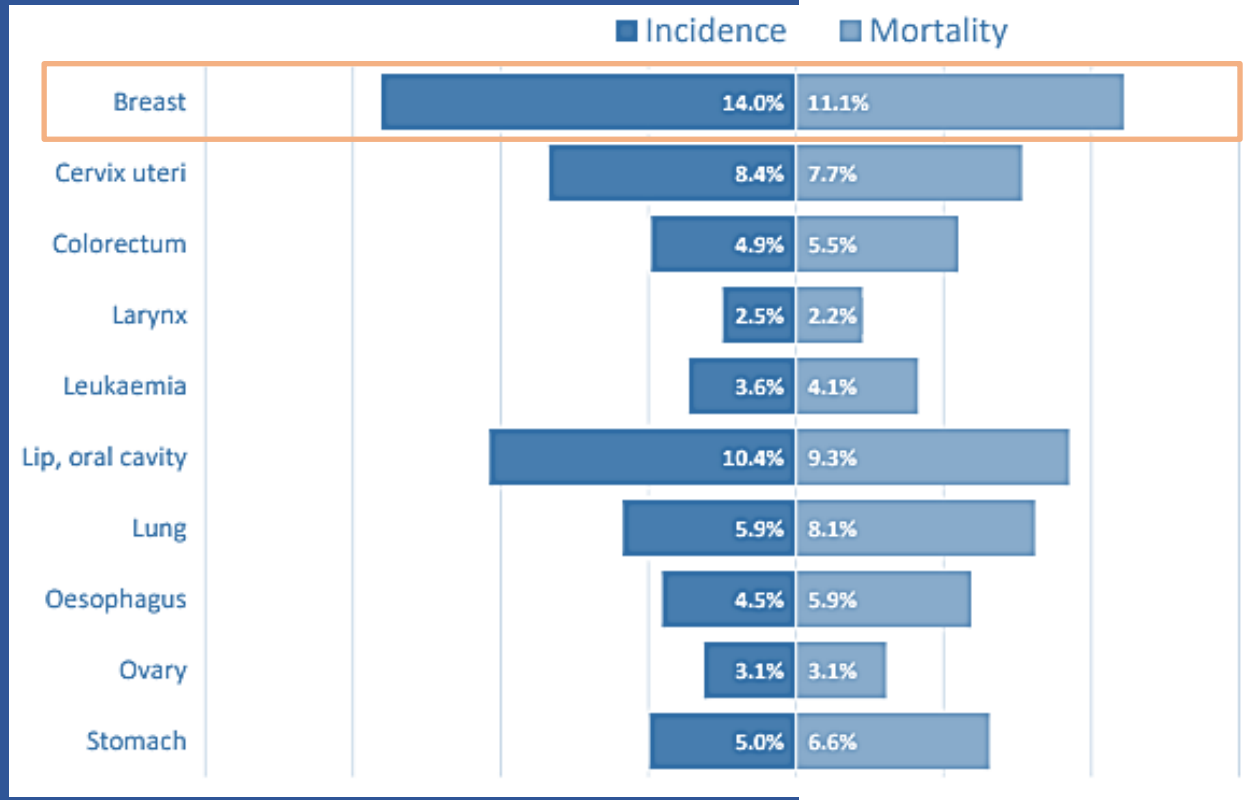
BURDEN OF CANCER

Total Population (2019)

1,366,417,756

Total # cancer cases (2018)	Total # cancer deaths (2018)
1,157,294	784,821

Total # Breast cancer new cases (2018)	Total # Breast cancer deaths (2018)
~ 162K	~ 87K

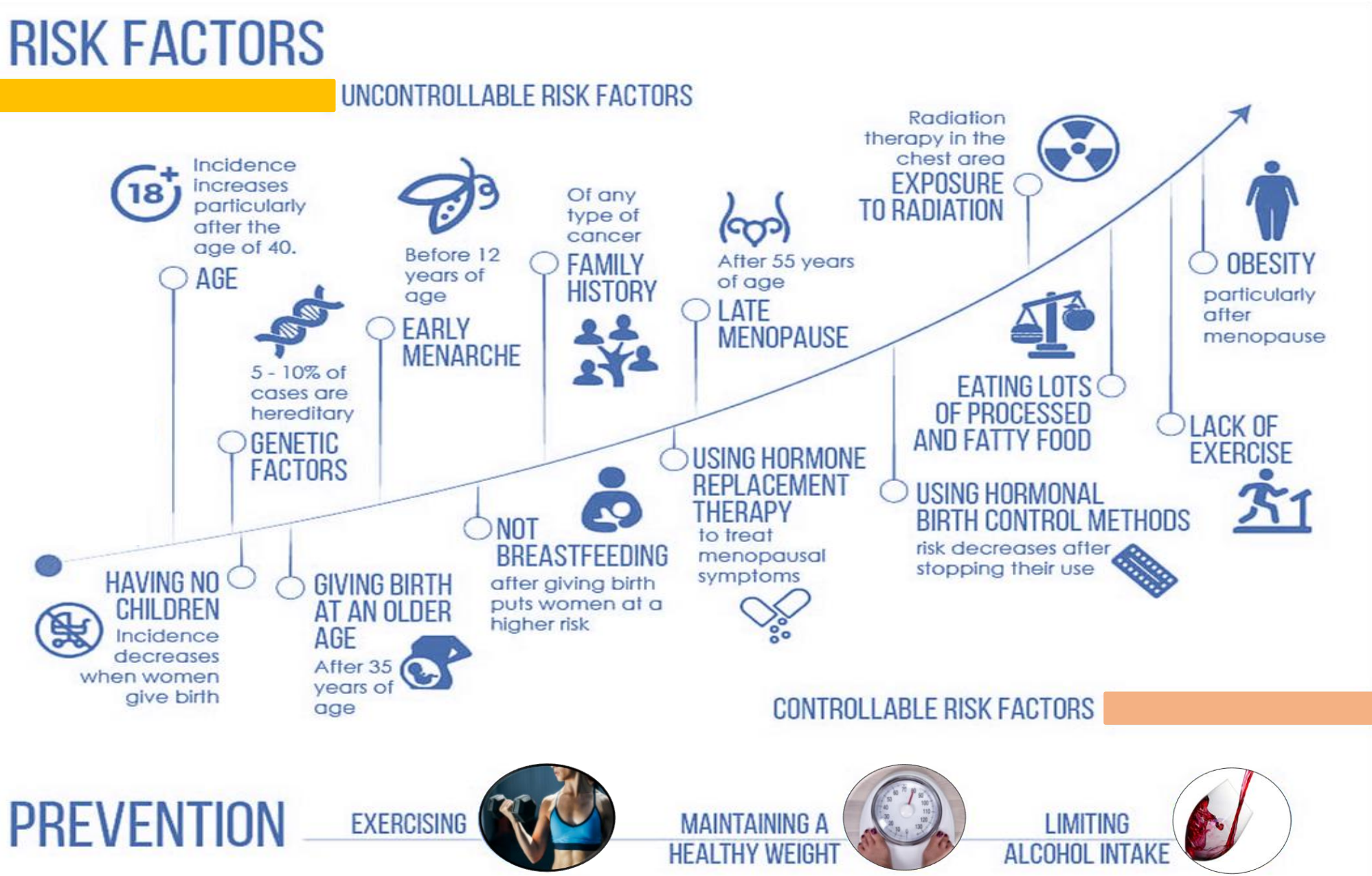


Most Common Cancer Cases (2018)

WHO Cancer Regional Profile 2020 (Globocan)

Breast Cancer
Risk Factors

BRCA mutation
BRCA1/ BRCA2 mutation (5 - 25% cases), it carries a 65-95% lifetime risk of cancer



Source: http://www.jbcp.jo/understandingbreastcancer/35

Breast Cancer Screening

Screening is used to look for cancer before any symptoms or signs. Early diagnosis enables timely access to treatment. The choice to undergo screening is also dependent on affordability and access

Screening Methods

- **Mammography**
- **Magnetic Resonance Imaging (MRI)**
- **Clinical Breast Examination**
- **Self Examination***
- **Biopsy**

Recommends
40-44 yr old : annually, optional
45-54 yr old: annually
>=55 yr old: every 2 years

Recommends
50-69 yr old : can be done, only if can be afforded
40-49 / 70-75 yr old: only in the context of rigorous research and in well-resourced settings

Does not recommend for women with an average risk of developing breast cancer but is recommended by USPSTF

Recommends
Women who are menstruating : Monthly, 7 days/ 1 week after the menses have stopped.
Post menopausal : Monthly

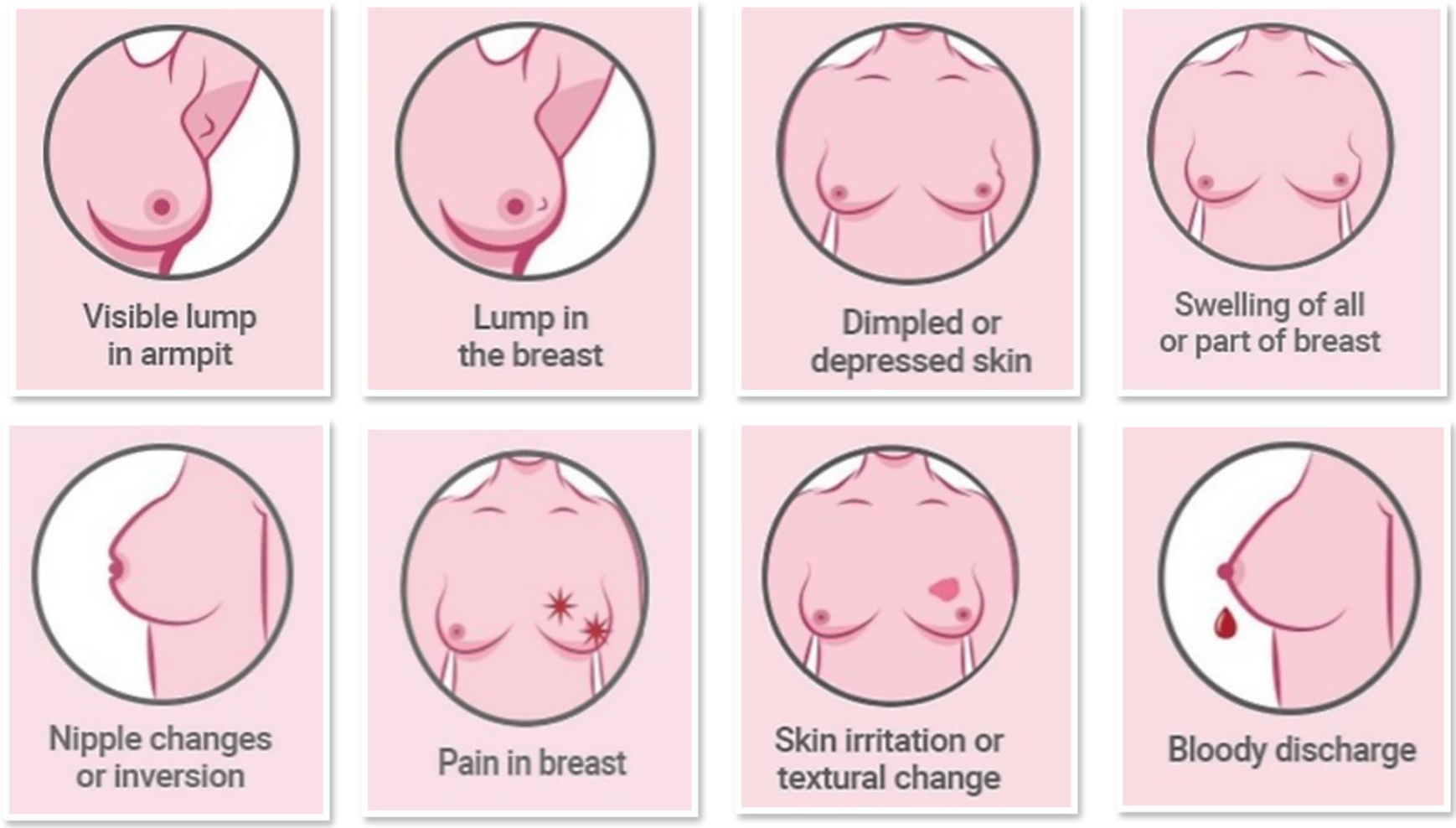
Check with your Doctor today for the best approach for you

ASCO Recommendation | WHO Recommendation | ICMR Recommendation

** For further information, please check http://cancerindia.org.in/breast-cancer/ U.S. Preventive Services Task Force (USPSTF)*

Breast Cancer Symptoms & Signs

In most cases a **lump in the breast is the first sign of a cancer risk**. A lump that is painless, hard, and has uneven edges, in some cases, cancerous lumps may be tender, soft and rounded. Hence, it is essential that a doctor be consulted at the earliest on noticing any unusual changes

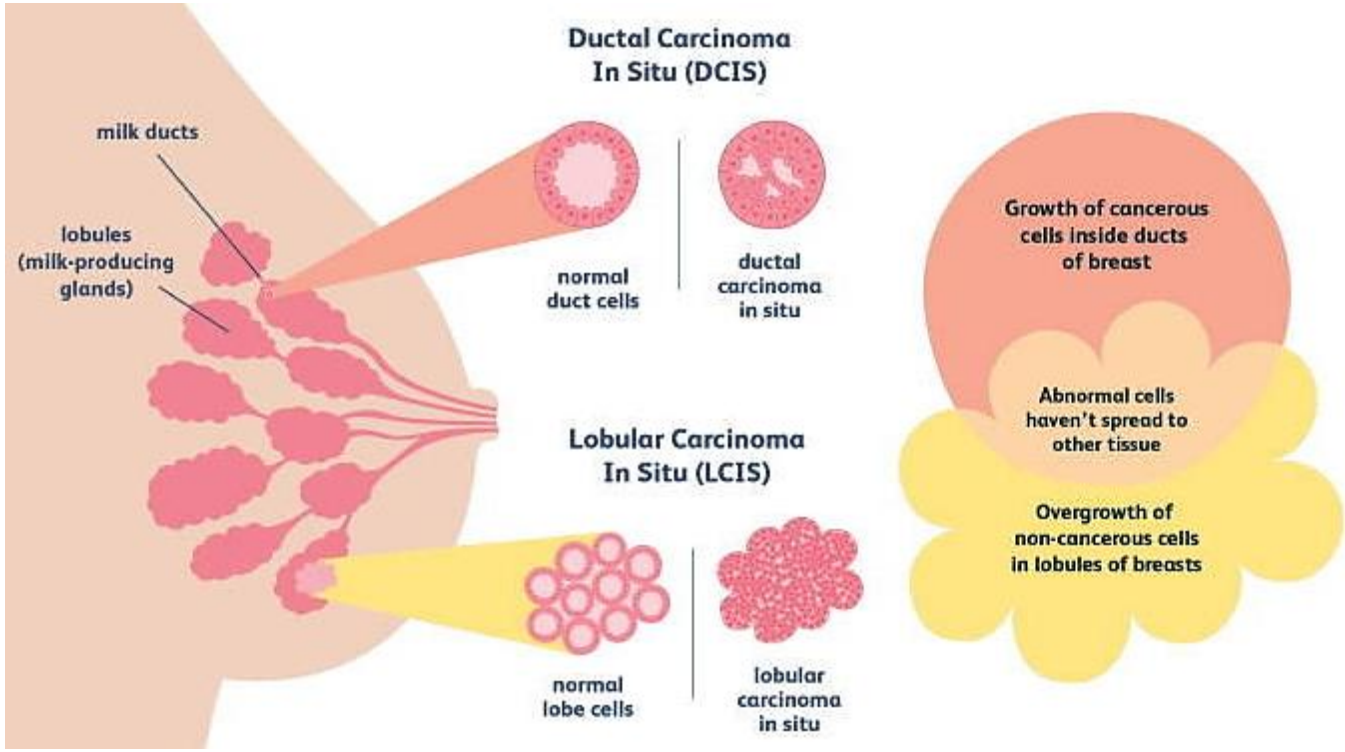


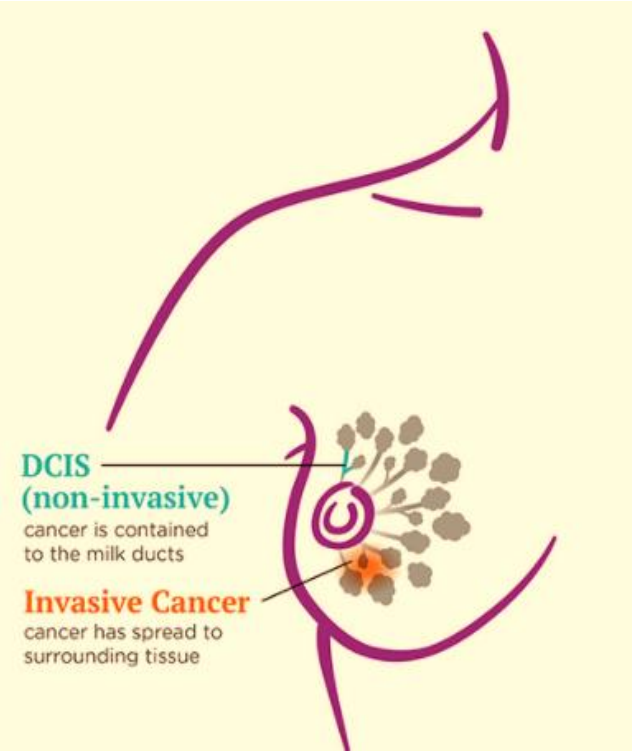
Source: Onco.com

Breast Cancer Types

In Situ / Invasive

Breast Cancer can be categorized on the basis of being invasive or non-invasive, stage & hormone receptor status & HER2 gene expression





In Situ Carcinoma is the earliest stage of breast cancer is non-invasive disease (Stage 0), which is contained within the ducts or lobules of the breast and has not spread into the healthy breast tissue (also called in situ carcinoma)

Invasive Cancer is the one that has either spread out of duct or lobule.

Source: https://www.pmccdenver.com/
https://www.mybreastcancertreatment.org/en-US/Understanding-DCIS

BLehrer LLC

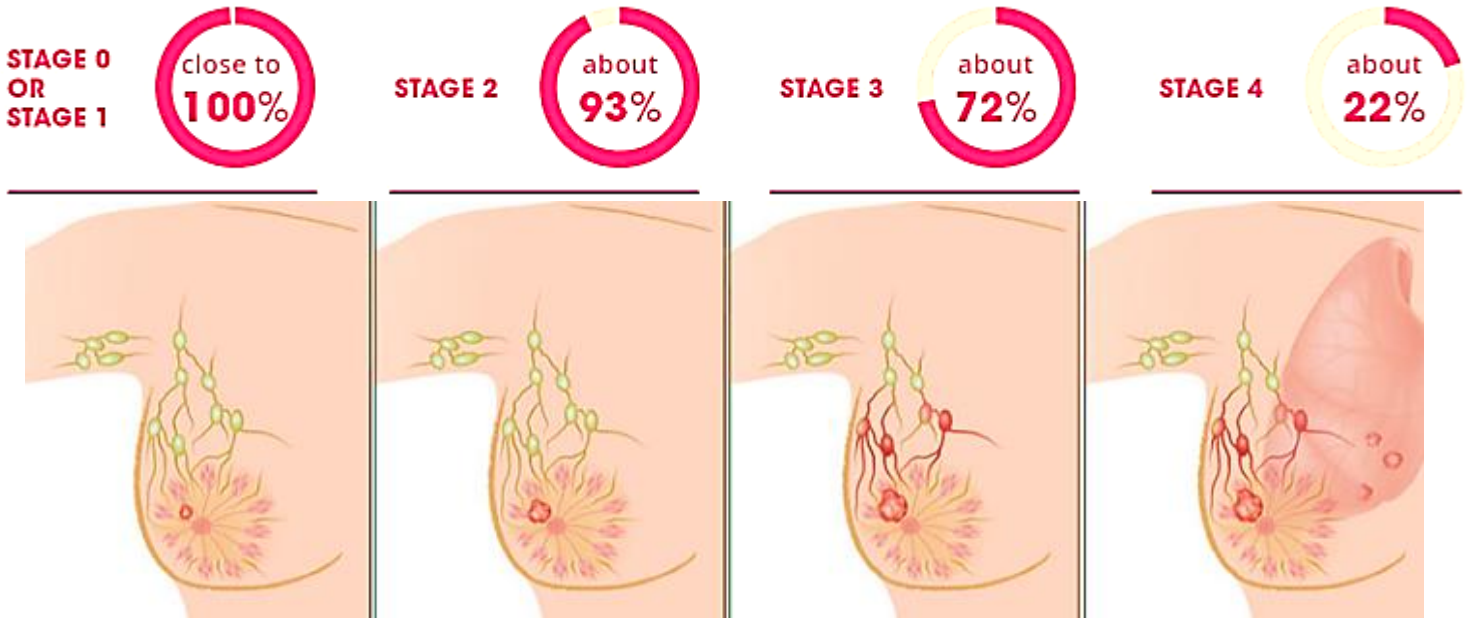
IBPS INTEGRATED BIOPHARMA AND PHARMA SOLUTION

Breast Cancer Types

by Stage

Breast Cancer can be categorized on the basis of being invasive or non-invasive, stage & hormone receptor status & HER2 gene expression

5-year Survival Rate



Stage I

Cancer in the breast tissue tumor less than 1 inch across

Stage II

Cancer in the breast tissue tumor less than 2 inch across. Cancer may also spread to auxiliary or nearby lymph nodes

Stage III

Tumor is larger than 2 inches across with extensive spread to auxiliary or nearby lymph nodes. Possible dimpling inflammation or change of skin colour

Stage IV

Spread of cancer beyond the immediate region of breast

Source: https://www.sanofi.com/en/about-us/healthcare-solutions/Oncology/breakthroughs-in-breast-cancer-research
https://www.diarystore.com/health-and-beauty/diseases/316/stages-breast-cancer-breast-cancer-subtypestreatment

SBLehrer LLC

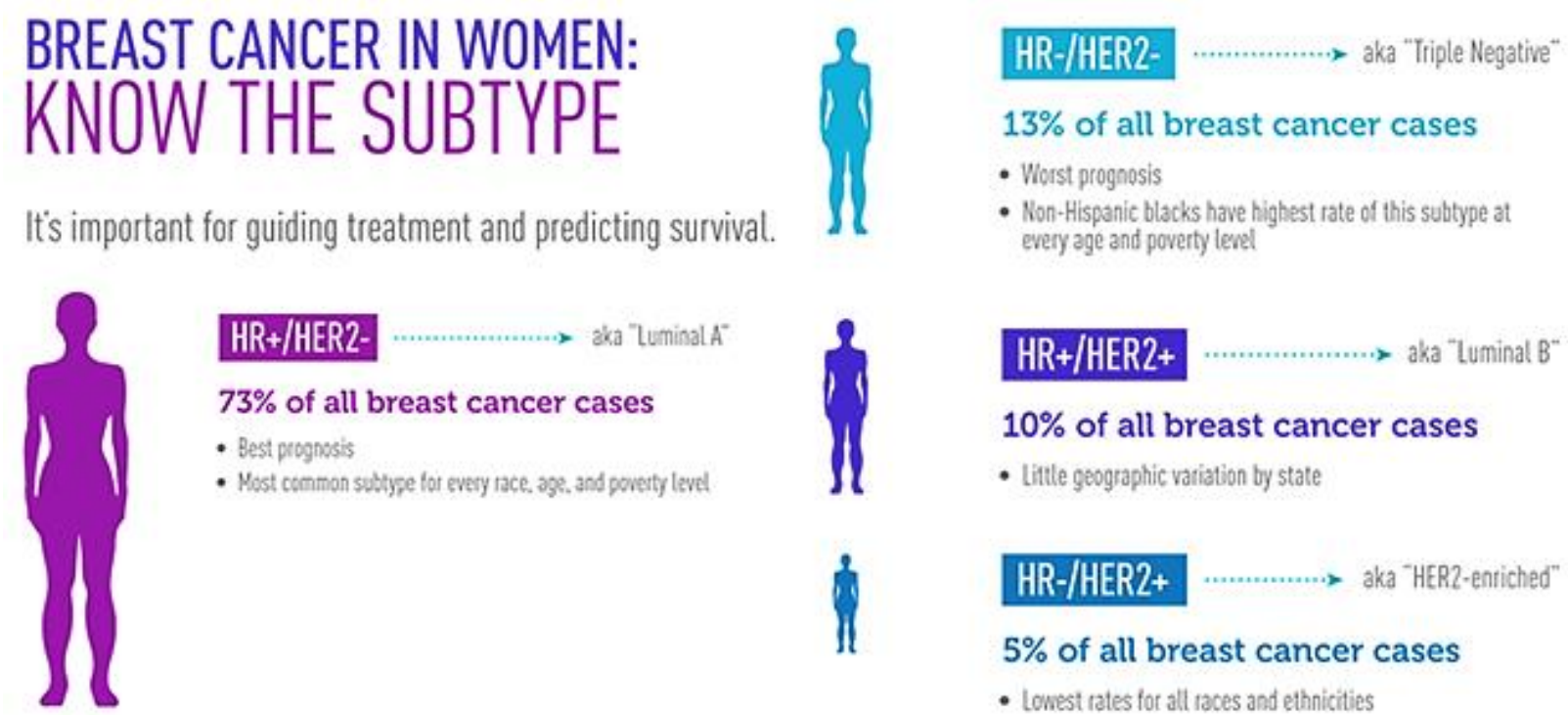
IBPS INTEGRATED BIOPHARMA AND PHARMA SOLUTION

Breast Cancer Types

By hormone receptor status and HER2 gene expression

Growth of some tumors is stimulated by the hormones oestrogen and progesterone. It is important to find out whether a tumor is oestrogen receptor (ER) or progesterone receptor (PgR) positive or negative. HER2 is also a receptor that is involved in the growth of cells

Luminal A-like	Luminal B-like	HER2 overexpressing	Triple negative tumors
ER and PgR positive, HER2 negative tumors	ER and/or PgR positive, HER2 positive or negative tumors	ER and PgR negative, HER2 positive tumors	Tumors that don't have ER, PgR or high levels of HER2



Source: https://www.bcrf.org/

Thank You