Breast Cancer: social significance, diagnosis and screening

OCTOBER: BREAST CANCER AWARENESS MONTH

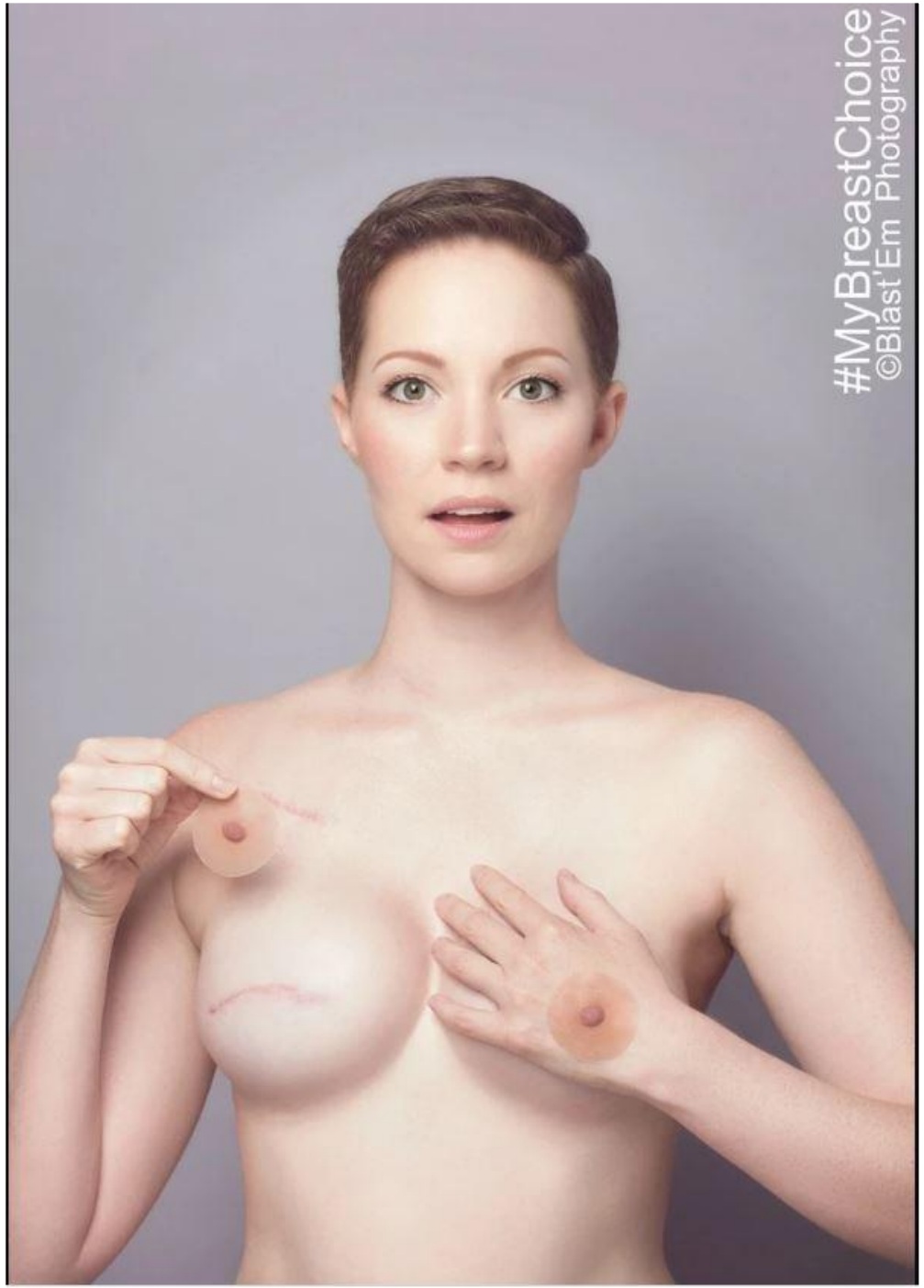
Aims of the meeting

- TO LEARN SOME ONCOLOGY TERMS AND WIDEN YOUR MEDICAL VOCABULARY
- TO FORM A PRESENTATION OF BC PROBLEM AS A SOCIAL DISASTER
- TO TELL ABOUT BC DIAGNOSIS AND SCREENING METHODS

Breast Cancer Awareness

It's an annual campaign organized in octover:

- to increase awareness of the disease
- to raise funds for its prevention

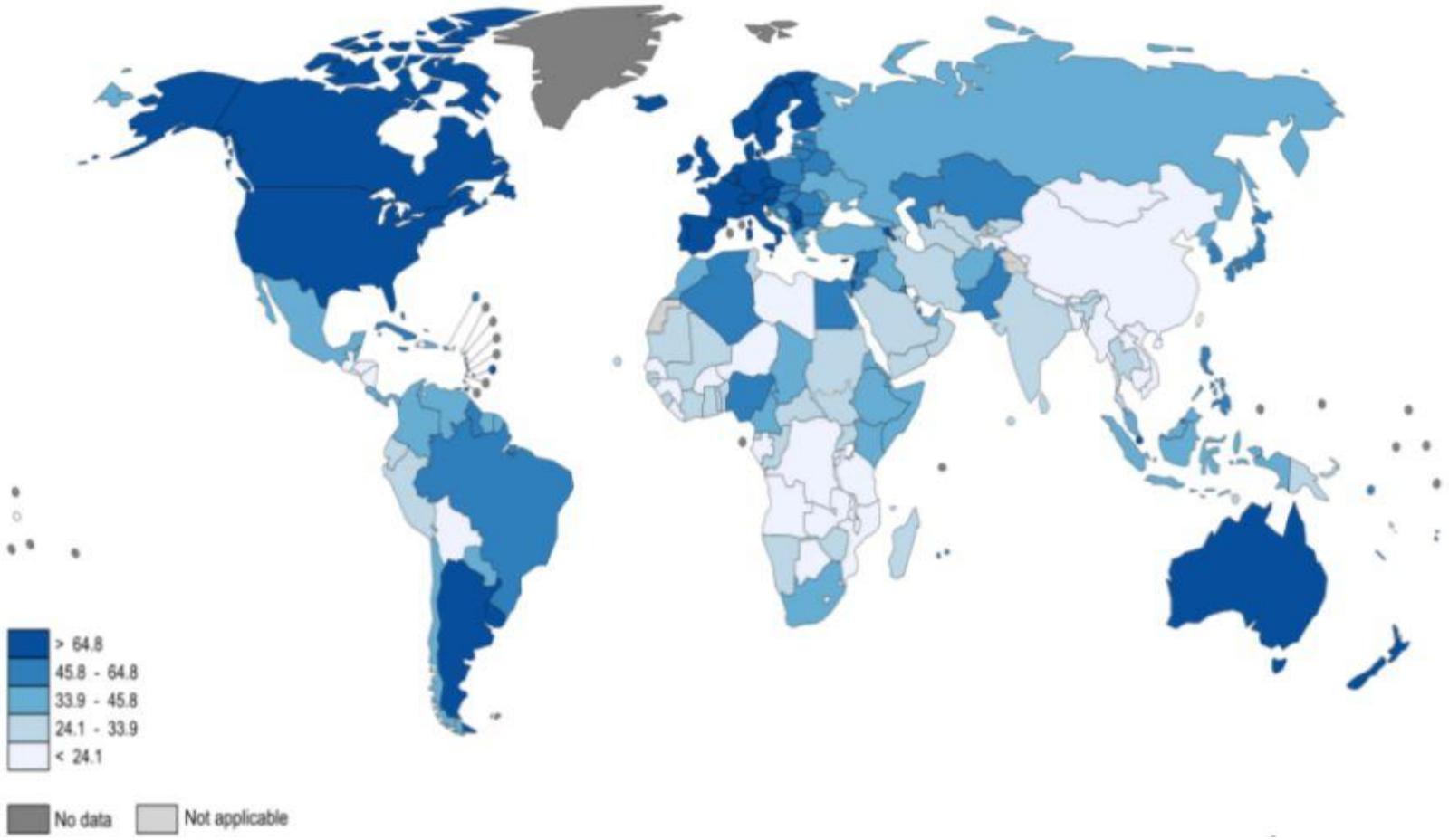


Epidemiology of BC

BC is the leading cancer in women worldwide.

The international research estimates an incidence of 1.4 million cases per year (2012).

BC is also the most frequent cause of cancer death in women, accounting for more than 450 000 deaths in the world.



Risks factors

Classical risk factors:

- age
- sex
- ethnic origin
- reproductive factors (nulliparity and delayed pregnancy)
- hormone treatments

Pregnancy at an early age is a protective factor.

Diagnosis

The gold standard for diagnosis is the triple diagnosis:

I. Clinical examination

- history
- palpation and inspection

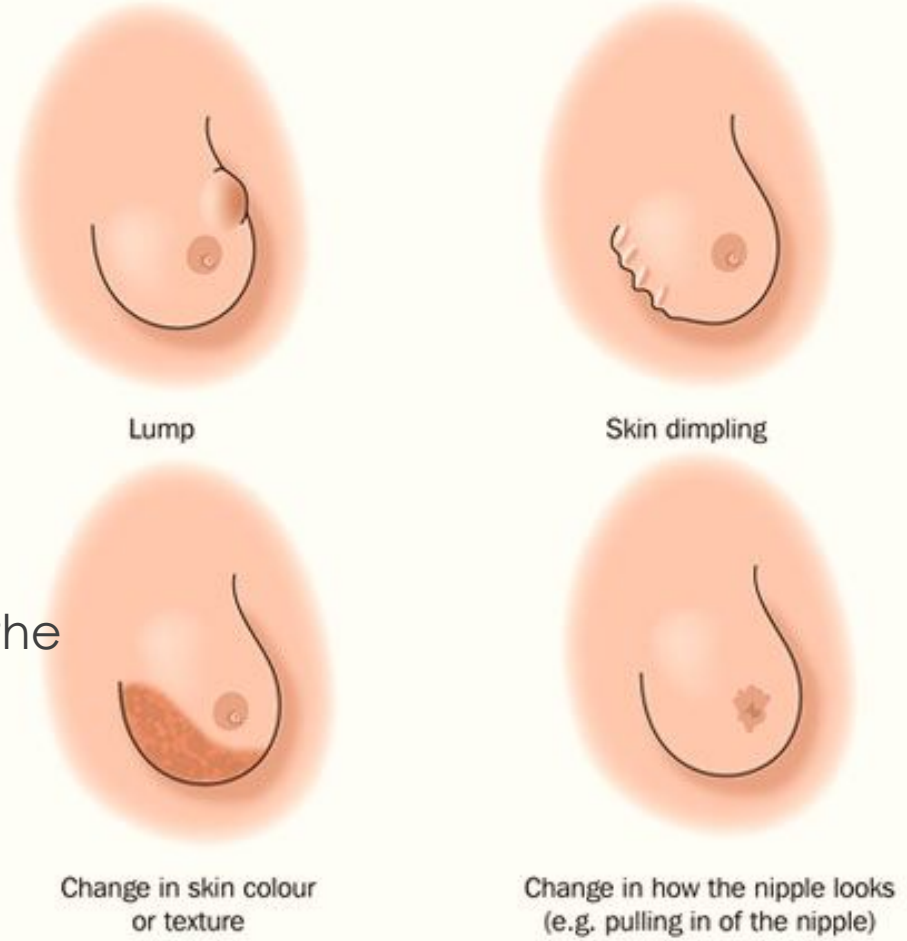
II. Breast imaging

- mammography
- breast and axillary ultrasound
- breast MRI

III. A core biopsy from suspicious lesion

Diagnosis: common symptoms

- Breast lump
- Skin or nipple retraction
- Discharge from the nipple
- Changes in breast size or shape
- Skin rash, ulceration, erythema, eczema of the nipple-areola complex
- Erythema and oedema of the breast
- "orange peel" symptom



- **(!)** a lump in the axilla or the supraclavicular fossa, skeletal or abdominal pain, cough, breathlessness or neurological signs are suggestive of <u>metastatic cancer</u>

Diagnosis: clinical examination

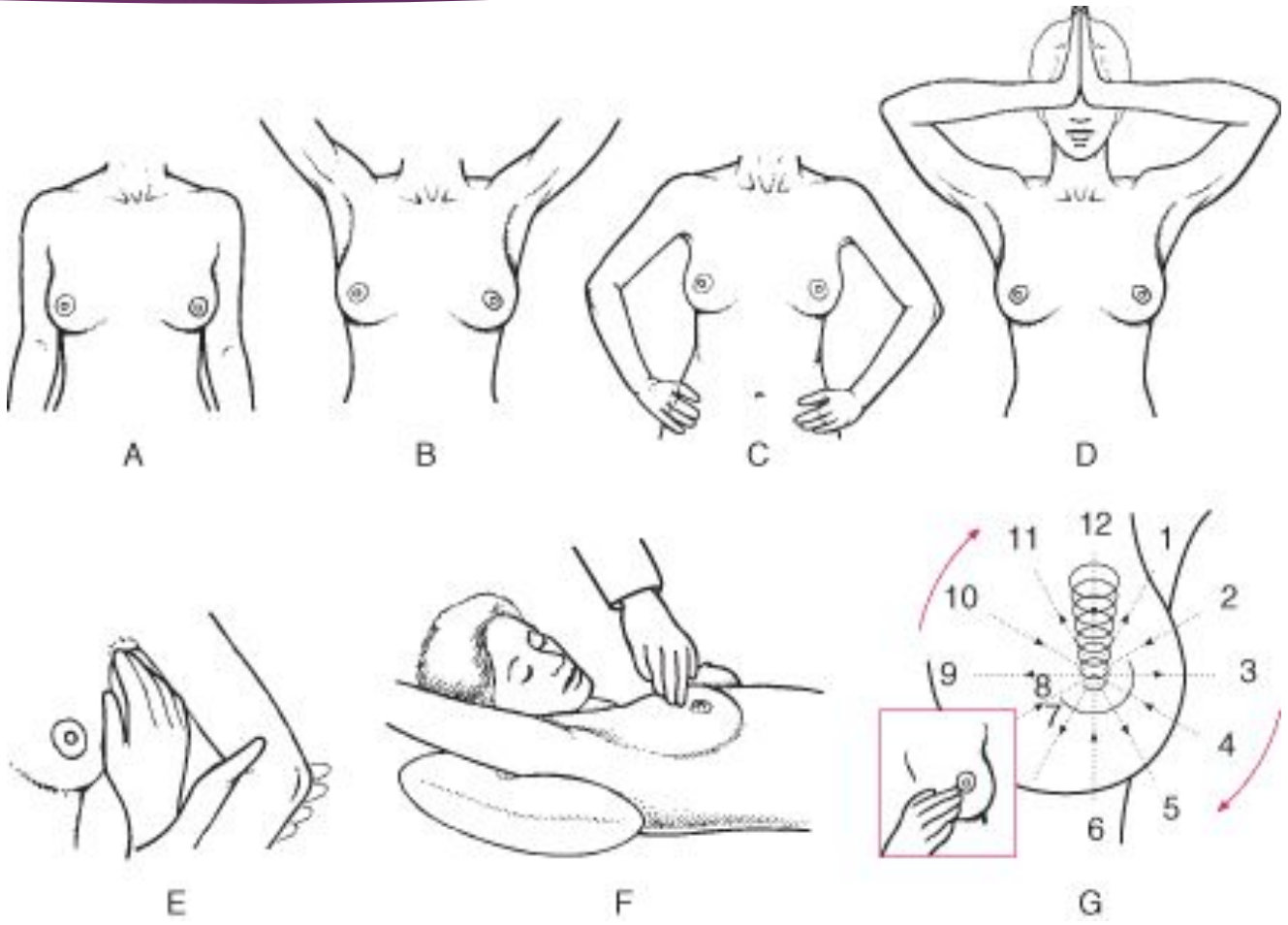
1. History taking

- family history of BC
- age of menarche
- number of births and pregnancies
- history of biopsies and breast operations
- date of the last menstrual period
- using of hormone replacement therapy

Diagnosis: clinical examination

2. The breast inspection and palpation

- The breast and the axilla should be palpated when the patient sitting or standing, the arms hanging freely as well as elevated. The examination is repeated when the patient is lying supine.



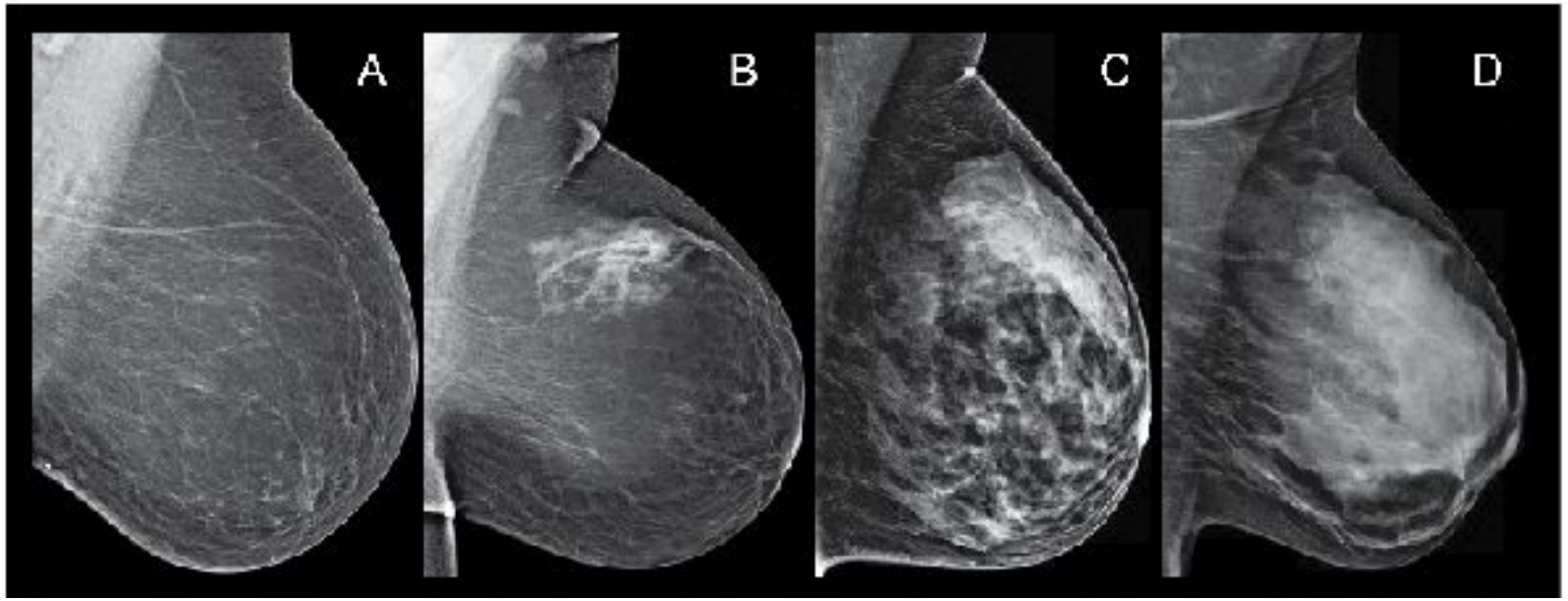
Diagnosis: breast imaging

1. Mammography

Typical findings are:

- irregular mass, stellate or spicular lesions
- micricalcifications
- structural distortions

Dense Breast Tissue Categories
(A) Fatty; (B) Scattered fibroglandular density; (C) Heterogeneously dense; (D) Extremely dense



Diagnosis: breast imaging

2. Breast and axillary ultrasound

- BC usually causes an echo-poor irregular lesion in ultrasonography
- Some BCs resemble a benign lesion, viewed as a regular and well-defined mass

Diagnosis: breast imaging

3. Breast MRI

- MRI may identify BCs not detected by mammography or ultrasonography.

Besides you can use the following methods to image:

- PET (positron emission tomography). PET may identify regional or distant metastases undetected by other means.

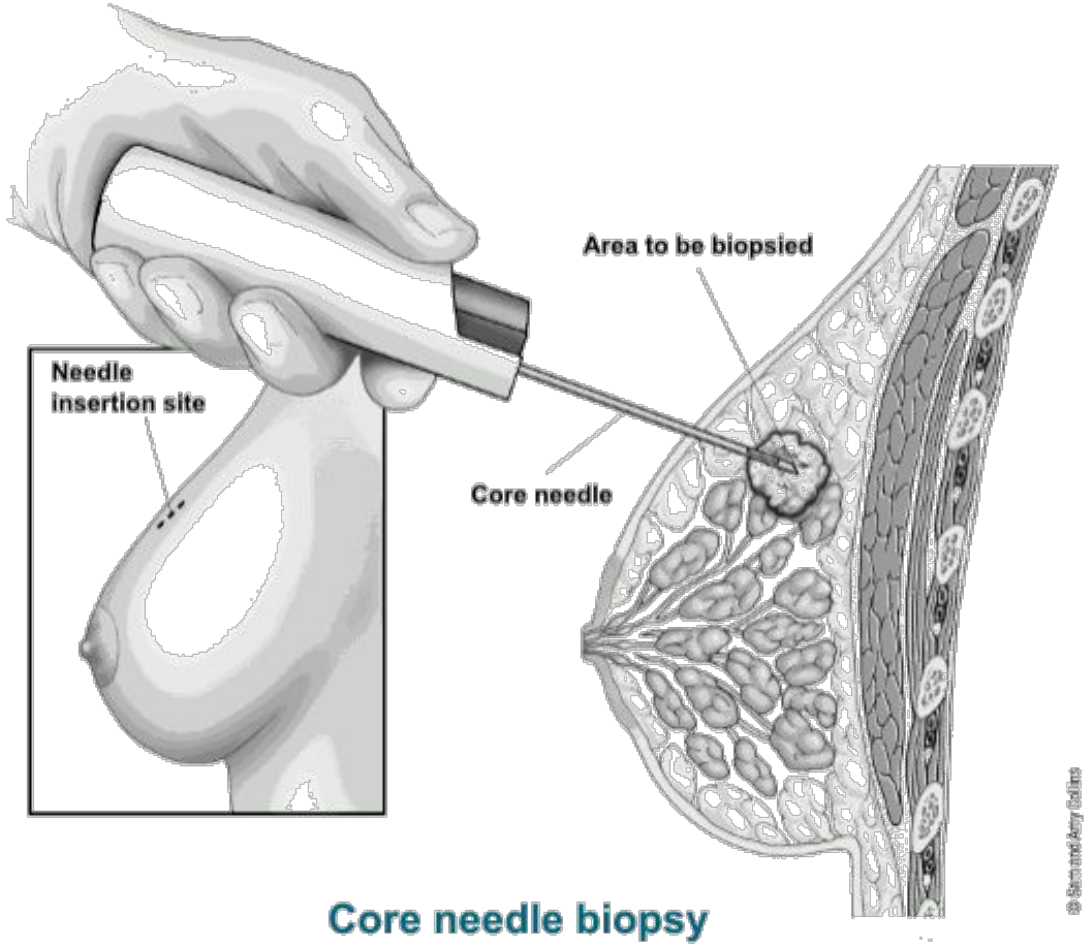
For the assessment of general health status:

- Full blood count
- liver, renal and cardiac function tests and etc.

Diagnosis: a core biopsy

The tissue material obtained with biopsy usually allows:

- detection of invasive tumor growth,
- histological typing of cancer
- the carrying out of assays to determine tumor's receptor status.



Core needle biopsy

Multidisciplinary work

The team should include:

- a breast surgeon
- a medical oncologist
- a radiation oncologist
- a radiologist
- a pathologist
- nurses
- plactic surgeons, nuclear medicine spesialists, geneticist may also contribute to treatment.

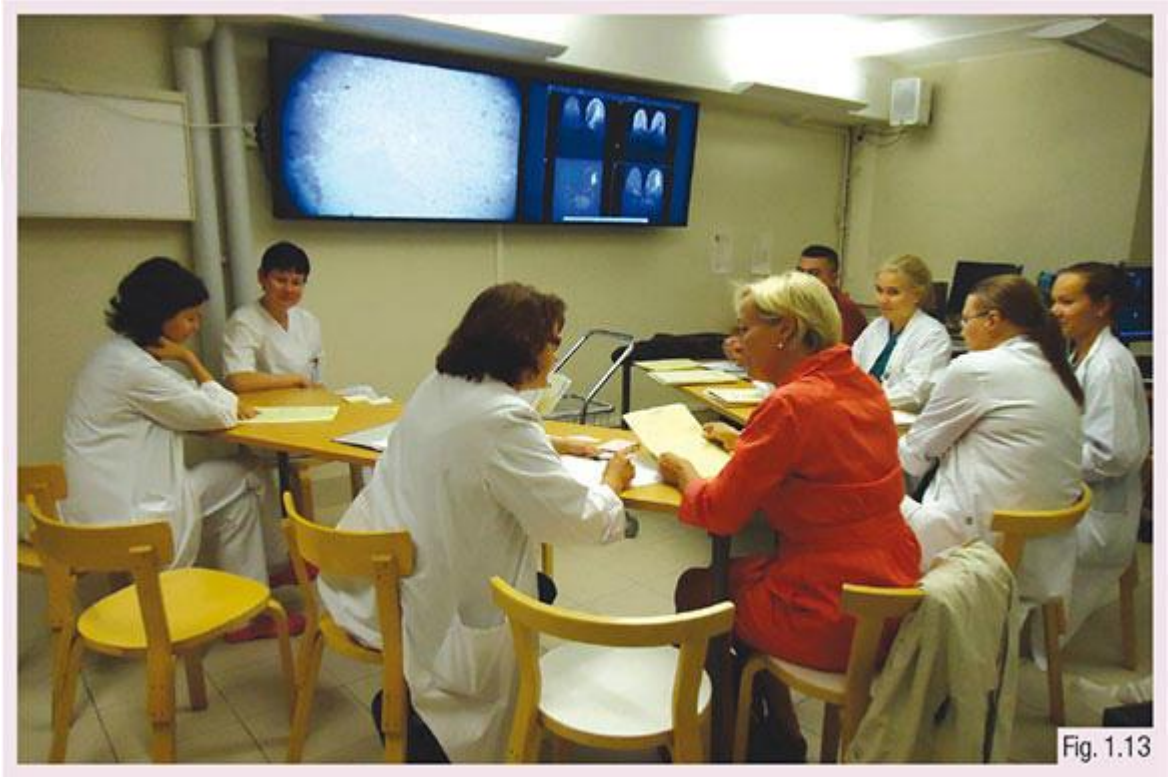


Fig. 1.13

Screening for BC

- **Breast self-examination** and **clinical breast examination** is important in BC detection, but are not reliable and effective in reducing BC mortality so they are not a part of screening programs.
- The gold standard of BC screening is **mammography**.
- The most common age for screening mammography is 50-70 years. In Russia the age is 40+
- The most common screening intervals is 2 years.
- Women of any age (including younger than 40 years) in case of clinically defined pathology in the breast, also should be directed to breast ultrasound and mammography.
- The women with high individual risk of BC (genetic predisposition, cancer cases in family medical history, etc.) should be screened in age of 25+ or in 10 years earlier then relative's age when breast cancer was happened.

What does the breast cancer awareness mean for you?

“

Attitude is a little thing that makes a big difference.

”

© Winston Churchill

Thank you for your attention!

YOU ARE AWESOME AUDIENCE!

Let’s discus a clinical case