

BREAST CANCER

Fundamentals

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Topics:

- Risk factors
- Imaging
- Biopsies
- Pathology
- Surgeries
- Post op treatment
- Case presentation

Risk Factors

- Gender
- Age
- Genetics
- Body
- Lifestyle
- Previous treatments

Gender

- Female greater than male

Age

- 20 1 in 1,674
- 30 1 in 225
- 40 1 in 69
- 50 1 in 44
- 60 1 in 29
- 70 1 in 26
- Lifetime 1 in 8

-ACS

Genetics

- Family history
 - Primary relatives
- Inherited factors
 - BRCA 1 and BRCA 2
 - Other

Body

- Obesity
- Not having children
- High breast density
- Certain breast tissue changes
- Menstrual history

Lifestyle

- Sedentary
- Alcohol
- Smoking
- Diet

Previous treatments

- Mantle radiation exposure
- Hormones
 - post menopause
 - birth control

Other

- Geography
- Light at night
- Personal history of breast cancer

Imaging

- Mammograms
- Ultrasound
- MRI

Mammograms

- Best imaging to detect early non invasive breast cancer
- 3D tomosynthesis digital
- Begin at age 40 and annually thereafter
- Is done < age 40 in certain situations

Ultrasound

- Used to image certain findings found on mammogram or MRI
- Used in younger women with palpable lump

MRI

- Screening tool for high risk women
- Staging tool for newly diagnosed breast cancers
- Check implant integrity

Biopsy types

- Needle biopsies
- Surgical biopsies

Pathology

- Benign
- Hyperplasia
 - Atypical
 - Usual
- Cancer

Cancer

- In Situ
 - Ductal Carcinoma In Situ (DCIS)
 - Lobular Carcinoma In Situ (LCIS)
- Invasive
 - Ductal
 - Lobular

Grade

- 1 = low
- 2 = intermediate
- 3 = high

Hormone Receptors

- Estrogen (ER)
- Progesterone (PR)
- Human epidermal growth factor (HER-2)

Margins

- Measurement of cancer free zone around the cancer
- Measured in mm.

Lymph nodes

Surgery

- Lumpectomy
- Mastectomy
- Sentinel node mapping in invasive cancers

Lumpectomy

Mastectomy

Sentinel Node Mapping

Radiation

Chemotherapy

Herceptin

Endocrine

Case presentation

References

- American Cancer Society
- National Cancer Institute
- National Comprehensive Cancer Network

Thank you